COMMONWEALTH of VIRGINIA

KAREN J. RAE
DIRECTOR

DEPARTMENT OF RAIL AND PUBLIC TRANSPORTATION
1313 EAST MAIN STREET, SUITE 300
P.O. BOX 590
RICHMOND, VA 23218-0590

(804) 786-4440
FAX (804) 786-7286
VIRGINIA RELAY CENTER
1-800-828-1120 (TDD)

NOTICE

This file contains the Comprehensive Agreement between the Virginia Department of Rail and Public Transportation and the Dulles Transit Partners, LLC. Exhibit E-2 - Design-Build Guaranty has been removed from this file in accordance with Virginia Code Subsection 2.2-3705.6(11) and Subsection 2.2-3705.1(12). This information will be made available if a Design-Build Contract is successfully negotiated at a future date.

Comprehensive Agreement to Develop the Dulles Corridor Rapid Transit Project

Dated as of June 11, 2004

by and between

VIRGINIA DEPARTMENT OF
RAIL AND PUBLIC TRANSPORTATION,

a Department of the Commonwealth of Virginia

and

DULLES TRANSIT PARTNERS, LLC,

a Virginia Limited Liability Company

TABLE OF CONTENTS

ARTICLE PAGE

ARTICLE I RECITALS 1

Section 1.1. 1
Section 1.2. 1
Section 1.3. 1
Section 1.4. 1
Section 1.5. 2
Section 1.6. 2
Section 1.7. 2
Section 1.8. 2
Section 1.9. 2
Section 1.10. 2
Section 1.11. 3
Section 1.12. 3
Section 1.13. 3
Section 1.14. 3

ARTICLE II DEFINITIONS 5

ARTICLE III ESTABLISHMENT OF PUBLIC-PRIVATE TRANSACTION 6

Section 3.1. Basic Agreement. 6
Section 3.2. Parties to Transaction; Roles and Responsibilities. 7
Section 3.3. Project Agreements. 9
Section 3.4. Nature of Parties' Interests Under Certain Project Agreements. 10
Section 3.5. Role of WMATA. 11

ARTICLE IV PRELIMINARY ENGINEERING 13

Section 4.1. DTP Obligations to Perform Preliminary Engineering Work. 13
Section 4.2. Preliminary Engineering Work Milestones. 13
Section 4.3. Project Standards and Deviations. 15
Section 4.4. Department Review. 16
Section 4.5. Changes to the Project Definition in the Revised Local Preferred Alternative (Revised LPA). 17

ARTICLE V DEVELOPMENT 18

Section 5.1. DTP Obligations to Perform Development Work. 18
Section 5.2a. Development Work Milestones. 19
Section 5.2. Commencement of Core Development Work, Incremental Development Work and Tasked Development Work. 19
Section 5.3. Key Personnel. 20
Section 5.4. Financing of Project. 20
Section 5.5. DTP Right-of-Way Obligations. 20
Section 5.6. Right-of-Way Acquisition Plan and Right-of-Way Plans. 22
Section 5.7. Acquisition by Condemnation. 23
Section 5.8. Acquisitions by Negotiation and Conveyances to Department. 24
Section 5.9. Hazardous Substance Investigations. 25
Section 5.10. Acquisition Costs. 26
Section 5.11. Changes in Project Right-of-Way Limits. 26
Section 5.12. Residue Parcels 26
Section 5.13. Department Review. 27

ARTICLE VI PRICING AND PAYMENT FOR DEVELOPMENT AND PRELIMINARY ENGINEERING WORK ... 28

Section 6.1. Payment for Development Work and Preliminary Engineering Work ... 28
Section 6.2. Payment for Design-Build Work. ... 30
Section 6.3. Payment of Approved Pre-CA Costs. ... 30
Section 6.4. Not used. ... 31
Section 6.5. Incentive Payments. ... 31
Section 6.6. Timing of Payments. ... 34

ARTICLE VII DEVELOPMENT AND PRELIMINARY ENGINEERING SCHEDULE, CHANGE ORDERS AND OTHER OBLIGATIONS ... 36

Section 7.1. Performance of Work in Accordance with Master Project Schedule. ... 36
Section 7.2. Change Orders. ... 37
Section 7.3. Project Execution Plan ... 45
Section 7.4. QA/QC Plan. ... 45
Section 7.5. WMATA Contacts. ... 46
Section 7.6. Meetings. ... 46
Section 7.7. Extranet. ... 46
Section 7.8. Utilities. ... 46
Section 7.9. Reporting. ... 47

ARTICLE VIII DESIGN-BUILD WORK ... 48

Section 8.1. Pricing of Phase 1 Design-Build Work. ... 48
Section 8.2. Negotiation of Fixed Price for Phase 1 Design-Build Work. ... 48
Section 8.3. Pricing Negotiation of Fixed Price for Phase 2 Design-Build Work. ... 48
Section 8.4. Conditions Precedent to Notices to Proceed for Design-Build Work. ... 49
Section 8.5. Pricing Documents. ... 50

ARTICLE IX CONTRACTING PRACTICES ... 53

Section 9.1. Limitation on DTP's Contracting Powers. ... 53
Section 9.2. Obligation to Refrain from Discrimination. ... 53
Section 9.3. Disadvantaged Business Enterprises. ... 53
Section 9.4. Disadvantaged Business Enterprise Employment and Contracting. ... 54
Section 9.5. Federal Requirements. ... 54

ARTICLE X INDEMNIFICATION, LIABILITY AND INSURANCE ... 55

Section 10.1. Indemnifications by DTP. ... 55
Section 10.2. No Indemnity Regarding Pre-Existing Hazardous Substances. ... 56
Section 10.3. Defense and Indemnification Procedures ... 57
Section 10.4. Claims Under Design-Build Contract. ... 58
Section 10.5. Indemnification Period. ... 58
Section 10.6. Liability. ... 58
Section 10.7. Responsibilities Regarding Insurance. ... 60
Section 10.8. Exclusivity. ... 62

ARTICLE XI REPRESENTATIONS, WARRANTIES AND FINDINGS ... 63

Section 11.1. Department Representations and Warranties. ... 63
Section 11.2. DTP Representations and Warranties. ... 63
Section 11.3. Conflict Of Interest. ... 64
Section 11.4. Survival of Representations and Warranties. ... 66
Section 11.5. Department's Findings Under PPTA. ... 66
Section 11.6. Department's Other Findings ... 67

ARTICLE XII TERMINATION AND SUSPENSION ... 68

Section 12.1. Termination Upon Expiration of Term. ... 68

Section 12.2. Termination for Public Convenience. 68
Section 12.3. Termination by DTP. 68
Section 12.4. Notice of Termination. 68
Section 12.5. Rights and Obligations Upon Termination. 68
Section 12.6. Compensation Upon Termination for Public Convenience. 69
Section 12.7. Termination Upon Fulfillment of Obligations 70
Section 12.8. Termination for Failure to Issue Notices to Proceed. 70
Section 12.9. DTP Actions Upon Termination. 70
Section 12.10. Liability After Termination. 70
Section 12.11. DTP Defaults. 70
Section 12.12. DTP Cure Periods. 71
Section 12.13. Department Remedies for DTP Default. 72
Section 12.14. Department Defaults. 72
Section 12.15. Department Cure Periods. 73
Section 12.16. DTP Remedies. 73
Section 12.17. Not Used. 74
Section 12.18. DTP Obligations Upon Termination. 74
Section 12.19. Inclusion in Subcontracts. 76
Section 12.20. Liability After Termination. 76
Section 12.21. Not Used. 76
Section 12.22. Suspension. 76

ARTICLE XIII DISPUTES 77

Section 13.1. Partnering. 77
Section 13.2. Dispute Resolution in Design-Build Contract; No Declaratory Judgment Procedure 77
Section 13.3. Negotiation by Authorized Representatives. 77
Section 13.4. Dispute Review Board. 78
Section 13.5. Litigation. 83

ARTICLE XIV RECORDS, REPORTS AND WORK PRODUCT 84

Section 14.1. Maintenance of Records. 84
Section 14.2. Public Records 84
Section 14.3. Reporting Requirements and Inspection and Audit Rights. 86
Section 14.4. Not Used. 87
Section 14.5. Not Used. 87
Section 14.6. Garnishments of Payments. 87
Section 14.7. Press Releases. 87
Section 14.8. Work Product. 87

ARTICLE XV RESERVED RIGHTS 88

Section 15.1. Exclusions from DTP's Interests. 88

ARTICLE XVI MISCELLANEOUS 89

Section 16.1. Assignment. 89
Section 16.2. Subcontractor Approvals. 89
Section 16.3. No Gift or Dedication. 90
Section 16.4. Notices. 90
Section 16.5. Binding Effect. 92
Section 16.6. Relationship of Parties. 92
Section 16.7. Third Party Beneficiary. 92
Section 16.8. Waiver. 92
Section 16.9. No Brokers 93
Section 16.10. Not Used 93
Section 16.11. Governing Law and Venue. 93

Section 16.12. Use of Police Power. 93
Section 16.13. Survival 94
Section 16.14. Subpoena. 94
Section 16.15. Construction and Interpretation of Agreement 94
Section 16.16. Counterparts. 95
Section 16.17. Entire Agreement; Amendment. 96

LIST OF EXHIBITS

I. Exhibits:

A. Definitions

B. Project Definition and Phase Descriptions

C. Term Sheet of Design-Build Contract

D. Federal Requirements

E. Form of Guaranty

  E-1 Comprehensive Agreement Guaranty

  E-2 Design-Build Guaranty

F. Phase 1 Development Work

  F-1 Scope of Phase 1 Development Work

  F-2 Phase 1 Pricing and Compensation

G. Phase 1 and 2 Preliminary Engineering Work

  G-1 Scope of Phase 1 and 2 Preliminary Engineering Work

  G-2 Phase 1 and 2 Pricing and Compensation

H. Phase 2 Development Work

  H-1 Scope of Phase 2 Development Work **[to be added by supplement]**

  H-2 Phase 2 Pricing and Compensation **[to be added by supplement]**

I. Department Governmental Approvals

J. Not Used

K. Approved Pre-CA Costs

L. Dispute Resolution Board Agreement

M. DBE Subcontracting Plan

N. Project Financial Plan

O. Invoice Form

P. WMATA Role - Excerpts from Dulles Corridor Rapid Transit Project Management Plan

Q. Certain Litigation Disclosed

This COMPREHENSIVE AGREEMENT TO DEVELOP THE DULLES CORRIDOR RAPID TRANSIT PROJECT ("Agreement") is made and entered into as of June 11, 2004, by and between the Department of Rail and Public Transportation ("Department"), a department of the Commonwealth of Virginia ("State"), the address of which Department is 1313 East Main Street, Suite 300, Richmond, Virginia 23218, and Dulles Transit Partners, LLC, a Virginia limited liability company ("DTP"), the address of which is Crystal Park 4, 2345 Crystal Drive, Suite 700, Arlington, Virginia 22202.

ARTICLE I

RECITALS

Section 1.1.
On March 25, 1995 the Governor of the State signed into law, effective July 1, 1995, the Public-Private Transportation Act (as amended, the "PPTA").

Section 1.2. In enacting the PPTA, the Virginia General Assembly found and declared, among other things, that:

(a) there is a public need for timely acquisition or construction of and improvements to transportation facilities within the State that are compatible with state and local transportation plans;

(b) such public need may not be wholly satisfied by existing ways in which transportation facilities are acquired, constructed or improved; and

(c) authorizing private entities to acquire, construct, improve, maintain, and/or operate one or more transportation facilities may result in the availability of such transportation facilities to the public in a more timely or less costly fashion, thereby serving the public safety and welfare.

Section 1.3. The PPTA grants the Department the authority to allow private entities to construct and/or operate qualifying transportation facilities if the Department determines there is a need for the facilities and private involvement would provide the facilities to the public in a timely and cost-effective fashion.

Section 1.4. The PPTA allows for both solicited and unsolicited project proposals.

Section 1.5. On July 1, 1995, the Department adopted Implementation Guidelines developed by the Commonwealth Transportation Commissioner for the selection of solicited and unsolicited proposals for negotiation under the PPTA Act.

Section 1.6. Pursuant to the PPTA, on December 15, 1998, Raytheon Infrastructure, Inc., submitted an unsolicited conceptual proposal (the "Conceptual Proposal") to the Department for the design, construction, operation and maintenance of certain transportation facilities which collectively the Department refers to as the Dulles Corridor Rapid Transit Project (the "Project") to generally be located in a transportation corridor in the northern part of Virginia extending generally from the vicinity of the West Falls Church Metrorail Station in Fairfax County through Tysons Corner, along the corridor formed by the Dulles Toll Road and the Dulles Greenway past Washington Dulles International Airport to Route 772 in Loudoun County (the "Dulles Corridor").

Section 1.7. In accordance with the Implementation Guidelines, the Department duly posted and published notice of the Conceptual Proposal. During the posting period ending January 15, 1999, the Department received one competing proposal submitted by Tysons-Dulles Corridor Group dated January 15, 1999. In accordance with PPTA Guidelines, the Initial Review Committee reviewed the proposals submitted by both Raytheon Infrastructure, Inc., and Tysons-Dulles Corridor Group for the development of the Project based on the proposers' qualifications and the technical and financial merits of the proposals.

Section 1.8. Following a determination by the Initial Review Committee that the Raytheon Infrastructure, Inc.'s Conceptual Proposal merited a further review, on February 16, 2000 the Commonwealth Transportation Board adopted a resolution approving the Conceptual Proposal for further evaluation and inviting a detailed proposal for consideration by the Public Private Transportation Advisory Panel (the "Advisory Panel") in accordance with the Implementation Guidelines.

Section 1.9. On October 26, 2000, Raytheon Infrastructure, Inc., notified the Department that it had expanded its team (DTP) to include Bechtel Infrastructure Corporation and West*Group Management LLC (formerly of Tysons-Dulles Corridor Group) to pursue the Project. On February 5, 2001, the Advisory Panel formally acknowledged DTP as the successor-in-interest to Raytheon Infrastructure, Inc. On May 31, 2002, DTP submitted its detailed proposal (the "Detailed Proposal") to the Advisory Panel for consideration. On April 1, 2004, DTP notified the Department that West*Group Management, LLC had withdrawn and was no longer a member of DTP.

Section 1.10. The Advisory Panel evaluated the Detailed Proposal using the "Proposal Evaluation and Selection Criteria" set forth in the *Commonwealth of Virginia Public-Private Transportation Act of 1995, Implementation Guidelines-Revised April 2001.* On December 5, 2002, the Advisory Panel recommended that the Department enter into negotiations with DTP, and on December 20, 2002, the Department notified DTP of its intent to enter into negotiations.

Section 1.11. On December 19, 2002, the Commonwealth Transportation Board approved the Locally Preferred Alternative for the Draft Environmental Impact Statement for the Project. The National Environmental Policy Act process is underway and a Record of Decision from the Federal Transit Administration is anticipated in 2004.

Section 1.12. On March 18, 2003, negotiations with DTP for a comprehensive agreement, consisting of this Agreement or any other Project Agreements and related agreements, commenced at the direction of the Department.

Section 1.13. Because financing for the entire Project has not been obtained as of the date of execution of this Agreement, the Project will be developed, designed, and constructed in several Phases with the Notice to Proceed for each Phase contingent upon securing financing for each Phase and satisfaction of other conditions precedent as described in this Agreement and in the other Project Agreements.

Section 1.14. The Department has identified the following significant benefits of entering into an agreement with DTP under the PPTA for the development, design and construction of the Project:

(a) In the future, DTP will invest $25 million in cost deferrals for the Project for development and preliminary engineering of both Phases of the Project. DTP has or its members have already invested significant funds in development of the Project. DTP's proposed level of investment is unprecedented for a PPTA project.

(b) DTP has been involved in the formation of proposed tax districts to contribute substantially to funding of the Project.

(c) DTP's involvement in preliminary engineering and design-build for the entire Project creates opportunities during the development phase to accelerate the Project as compared to traditional procurement approaches. This could result in significant savings in procurement cycles and engineering time and lessen the likelihood of cost increases associated with change orders. Schedule reductions will generate savings through lower costs of capital, lower development costs, and lower construction escalation costs, and will deliver a completed Project benefiting the region earlier.

(d) DTP's involvement in preliminary engineering and design-build will result in a reduction, as compared to design-build procurements, in the substantial amount of engineering needing to be re-performed by the design-builder to reflect innovation it brings to construction means and methods which will result in cost savings to the Project. It will also reduce change orders during design-build because of the early resolution of scope problems before the price is fixed.

(e) DTP's involvement with development and preliminary engineering will enable DTP to provide a firm fixed price and schedule for the Project earlier (and with less preliminary engineering required) than any other method of procurement and before the stakeholders make a commitment to pay. In addition, the fixed price will include all design-build aspects for the entire Project which provides protection from cost overruns.

(f) DTP is incentivized to achieve schedule and cost savings during development and preliminary engineering because a significant portion of its compensation is tied to and contingent upon achieving certain significant milestones and deliverables for the Project.

(g) DTP's performance of systematic value-planning program early in the development period and more detailed value-planning process during preliminary engineering will produce greater opportunity to incorporate construction cost efficiencies and optimize life cycle cost for the Project.

NOW, THEREFORE, in consideration of the covenants contained herein and for other good and valuable consideration, the receipt and adequacy of which are hereby acknowledged, the Department and DTP agree as follows:

ARTICLE II

DEFINITIONS

2.1 All capitalized terms used in this Agreement but not expressly defined in this Agreement have the respective meanings set forth in **Exhibit A** attached hereto.

ARTICLE III

ESTABLISHMENT OF PUBLIC-PRIVATE TRANSACTION

Section 3.1. Basic Agreement.

(a) Department and DTP agree that the Project, as described in **Exhibit B** attached hereto shall be developed, designed, permitted, financed, acquired, constructed, equipped and insured in a transaction involving, together, a series of agreements setting forth distinct roles and responsibilities of the public and private sector participants.

(b) This **Article III** identifies and establishes the basic roles and responsibilities of such participants. This **Article III** is not intended, and shall not be construed, to impose any obligations on any party, or provide any party with any rights, that are in addition to any rights or obligations set forth elsewhere in this Agreement and the other Project Agreements in connection with the subject matter thereof.

(c) The Project shall be developed in Phases. The Department will issue a Notice to Proceed to DTP to undertake Development Work and Preliminary Engineering Work for Project Phases. At the times specified in this Agreement, DTP will submit to the Department a Fixed Price Proposal for the Design-Build Work based upon 100% complete Preliminary Engineering Plans and Specifications approved by the Department as set forth in greater detail in **Article VIII**. The parties will jointly review the Fixed Price Proposal as set forth in greater detail in **Article VIII**. Upon agreement by the Department and DTP to a fixed price, and agreement as to mutually satisfactory contract terms, the Department and DTP will enter into the Design-Build Contract and Phase Supplement for each such Project Phase containing a Contract Price for the Design-Build Work for that Project Phase and a Guaranteed Testing Readiness Date, Guaranteed Substantial Completion Date and Guaranteed Final Completion Date. The Department shall not be obligated to issue a Notice to Proceed for Preliminary Engineering, Development or Design-Build Work for a Project Phase until the conditions precedent set forth in this Agreement and any other Project Agreements for such Phase have been satisfied or waived in writing.

(d) DTP's rights, obligations and liabilities with respect to the final design and construction of the Project (the "Design-Build Duties") shall be as stated in, or arising from, the Design-Build Contract. Notwithstanding any description of design and construction activities or of the Design-Build Contract appearing in this Agreement, this Agreement shall neither add to nor diminish from DTP's Design-Build Duties.

(e) DTP shall not have the right or the obligation to commence Preliminary Engineering, Development or Design-Build Work on Project Phases until the conditions precedent to the Notice to Proceed for each such Phase, as set forth in this Agreement and any other Project Agreements, are satisfied or waived in writing.

(f) The parties acknowledge that all amounts payable by the Department under this Agreement and any other Project Agreements are subject to appropriations by the Virginia General Assembly and subsequent allocations by the Commonwealth Transportation Board. Moreover, the Department is not obligated to provide funding for Preliminary Engineering Work, Development Work, or Design-Build Work until all conditions precedent as set forth in this Agreement and any other Project Agreements have been satisfied or waived in writing.

Section 3.2. Parties to Transaction; Roles and Responsibilities.

(a) The parties to the transaction and the Project Agreements under which the Project shall be developed, designed, permitted, financed, acquired, constructed, equipped, insured and warranted are the Department, DTP, Bechtel Guarantor and Washington Guarantor.

(b) The Department:

(i) shall establish, pursuant to the Project Agreements, the terms and conditions under which the Project will be implemented;

(ii) hereby grants DTP the right to develop the Project in Phases on the terms and conditions set forth in this Agreement and the other Project Agreements;

(iii) shall, subject to appropriation and allocation, provide funds for payment of the costs of the Development Work and Preliminary Engineering Work as specified in this Agreement and the other Project Agreements and of Design-Build Work as specified in this Agreement and the other Project Agreements;

(iv) shall enter into leases or easements or take title to and, as necessary and appropriate, condemn all Project Right-of-Way, as provided in this Agreement and the other Project Agreements;

(v) shall accept each Project Phase upon final completion thereof in accordance with the terms in the Design/Build Contract and;

(vi) shall obtain or cause others to obtain regulatory approvals specified in **Exhibit I** (the "Department Governmental Approvals");

(vii) shall, as required, enter into intergovernmental agreements to support the Project with all necessary governmental entities including, but not limited to, the Federal Transit Administration ("FTA"), Fairfax County, Loudoun County, Metropolitan Washington Airports Authority ("MWAA"), TRIP II, the Commonwealth's Department of Treasury, and the Virginia Department of Transportation ("VDOT").

(viii) Shall enter into an agreement with WMATA for its involvement in preliminary engineering, design and construction to facilitate WMATA's ability to accept the completed Project Phases into the WMATA Adopted Regional System ("ARS") for operation in accordance with the conditions set forth below which were established by the WMATA Board of Directors in Resolution 2002-54, and the conditions set forth in any future resolutions adopted by the WMATA Board of Directors concerning acceptance of the Project into the ARS:

1. Satisfactory completion of the Final Environmental Impact Statement;

2. Issuance of a Record of Decision by the FTA;

3. WMATA Board of Directors approval of a final financial plan for the construction, acquisition and operation of the new facilities;

4. Evaluation of implementing financial commitments between DRPT and funding sources in the form of local funding agreements and the federal Full Funding Grant Agreement;

5. WMATA's determination that the Project has been completed in accordance with the Final Environment Impact Statement, approved General Plans and all WMATA system requirements and that the Project, as built and tested, is suitable for acceptance into the ARS;

6. Conveyance to WMATA by DRPT of a property interest in the Project adequate to assure WMATA's continuing control of the Project property throughout the useful life of the Project; and

7. Any indemnification obligation from WMATA to Toll Road Investors Partnership II, MWAA, or any other entity associated with the Project is subject to WMATA Board of Directors approval, and any indemnification obligation provided by DRPT to Toll Road Investors Partnership II, MWAA, or any other entity associated with the Project will be subject to a determination by WMATA that such indemnification does not create a new liability or potential liability for WMATA.

(iv) shall coordinate with the Commonwealth Transportation Board, the Treasury Board and the Virginia General Assembly regarding toll increases and the use of a portion of the tolls generated by the Dulles Toll Road which may be required to pay the Commonwealth's share of the costs of the Project; and

(ix) shall have the right at all times during the term of this Agreement and the other Project Agreements to oversee the performance of the Work under this Agreement and the other Project Agreements.

(c) DTP:

(i) shall have the right and obligation to or shall cause others pursuant to assignments or subcontracts, to develop, design, obtain all Regulatory Approvals, other than Department Governmental Approvals, perform Project Right-of-Way acquisition and utility relocation services for, and construct and perform all other work respecting the Project as and when provided in this Agreement or any other Project Agreements;

(ii) shall have the right and obligation to perform the Development Work in accordance with **Exhibit F-1**;

(iii) shall have the right and obligation to perform the Preliminary Engineering Work in accordance with **Exhibit G-1**;

(iv) shall cause the Project to be insured, as and when provided in the Design-Build Contract and as set forth in this Agreement or any other Project Agreements;

(v) shall cause the provision of payment and performance bonds for the Design-Build Work, as and when provided in the Design-Build Contract;

(vi) shall defer a portion of its costs for the Development Work and Preliminary Engineering Work as set forth in this Agreement;

(vii) shall cause Bechtel Guarantor to execute and deliver the Comprehensive Agreement Guaranty and the Design-Build Guaranty;

(viii) shall cause Washington Guarantor to execute and deliver the Comprehensive Agreement Guaranty and the Design-Build Guaranty; and

(ix) shall not be responsible for the procurement of rail vehicles or for operations and maintenance of the Project.

(d) Bechtel Guarantor shall guarantee to the Department the performance and completion of all DTP's obligations under this Agreement, the Design-Build Contract and the other Project Agreements (including, but not limited to, warranty and indemnification obligations), in accordance with the provisions of the Comprehensive Agreement Guaranty and the Design-Build Guaranty.

(e) Washington Guarantor shall guarantee to the Department the performance and completion of all DTP's obligations under this Agreement, the Design-Build Contract and the other Project Agreements (including, but not limited to, warranty and indemnification obligations), in accordance with the provisions of the Comprehensive Agreement Guaranty and the Design-Build Guaranty.

Section 3.3. Project Agreements. The Project Agreements and their content are briefly described below. The Project Agreements are to be read and construed together, and together constitute the comprehensive agreement under the PPTA (notwithstanding the fact that this Agreement is entitled "Comprehensive Agreement").

(a) Comprehensive Agreement. The Department and DTP are entering into this Agreement and the other Project Agreements to establish the general structure and arrangements for implementing the Project and to establish rights and responsibilities of the parties respecting the Project including the right and obligation to perform the Development Work, Preliminary Engineering Work, and Design-Build Work for all Project Phases.

(b) Design-Build Contract. Attached to this Agreement as **Exhibit C** is a preliminary draft term sheet for the Design-Build Contract between the Department and DTP. After the Agreement Date, it is the parties' intent to negotiate a Design-Build Contract consistent with **Exhibit C**. The terms of the Design-Build Contract will need to be finalized in order to permit the preparation of the Fixed Price Proposal. The Contract Price for Design-Build Work for each such Project Phase, CPM Schedule, Schedule of Values, Maximum Payment Curve, Guaranteed Testing Readiness Date, Guaranteed Substantial Completion Date, Guaranteed Final Completion Date and other related provisions will be set forth in a Phase Supplement to the Design-Build Contract.

(c) Guarantees. DTP shall cause Bechtel Guarantor and Washington Guarantor to execute and deliver the Comprehensive Agreement Guarantees and the Design-Build Guarantees in the form attached to this Agreement as **Exhibit E-1** and **E-2**.

Section 3.4. Nature of Parties' Interests Under Certain Project Agreements.

The Department and DTP intend and agree that:

(a) DTP shall not have any fee title, leasehold estate, easement or other real property interest of any kind in or to the Project or the Project Right-of-Way by virtue of this Agreement, any of the other Project Agreements or otherwise;

(b) DTP's property interests under this Agreement or any other Project Agreements are limited to contract rights constituting intangible personal property (and not real estate interests); and

(c) Except with respect to property interests held by other governmental entities, the Department will be the sole owner of fee simple title to, or leasehold interest or easements in, the Project and the Project Right-of-Way and all improvements constructed and all tangible personal property installed pursuant to the Design-Build Contract or otherwise in connection with the Project, with full power and authority to possess, control and utilize the Project and Project Right-of-Way, subject only to the terms and conditions of the Project Agreements.

Section 3.5. Role of WMATA.

The parties recognize that the Washington Metropolitan Area Transit Authority ("WMATA") is the entity ultimately responsible for operation and maintenance of the completed Project Phases. WMATA will serve as the Technical Manager for preliminary engineering, final design, and day-to-day management of the design-builder during design and construction to ensure that the completed Project Phases are implemented in accordance with WMATA design criteria and standards.

As set forth in Chapter 2.1 of the Project Management Plan, WMATA's role in Preliminary Engineering is as follows:

> "PE Technical Manager – WMATA: As the ultimate owner and entity responsible for operation and maintenance of the completed Metrorail extension, WMATA will serve as the day-to-day Technical Manager for Preliminary Engineering. WMATA will provide project management services to DRPT through an intergovernmental agreement (Second Agreement) under which DRPT has delegated WMATA limited authority to manage the day-to-day activities of Preliminary Engineering. DTP will receive technical direction and report to the WMATA Senior Project Manager for Preliminary Engineering activities in accordance with the DRPT issued scope of work. Any decisions that impact Project scope, schedule, or budget must be approved in advance by DRPT. After all construction and start-up related contracts have been closed out, DRPT intends to transfer the Project's line, facilities, and systems to WMATA for operation, maintenance, and ultimate ownership. Upon completion of WMATA's safety certification process and

> WMATA's acceptance of the Project into the Adopted Regional System (ARS), in accordance with WMATA Compact procedures, WMATA will operate and maintain the new rail line as an integrated element of the full Metrorail and Metrobus system. "

Chapter 12, PMP, states:

> "[t]he philosophy for construction management will be similar to the approach outlined in this PMP (assuming successful negotiations with DTP). WMATA will serve as the day-to-day Technical Manager for final design, day-to-day management of the design-builder during design and construction to ensure the completed segments are implemented in accordance with WMATA standards and design criteria."

The functional relationship between the Department, WMATA and DTP is shown in **Exhibit P**. As of the date of this Agreement, to the extent there is any conflict between the role of DTP as described in **Exhibit P** and as provided in this Agreement, the terms of this Agreement shall govern. Any amendment to this Agreement that affects **Exhibit P** shall require the consent of WMATA.

ARTICLE IV

PRELIMINARY ENGINEERING

Section 4.1. DTP Obligations to Perform Preliminary Engineering Work.

(a) DTP shall perform all professional engineering and architectural services as well as technical, administrative, clerical and other services necessary to provide the agreed upon drawings, studies, reports and other supporting documents to complete the Preliminary Engineering Work for each Phase of the Project. These services are described in detail in **Exhibit G-1**. Certain Preliminary Engineering Work will only be performed pursuant to task orders as provided in **Exhibit G-1**.

(b) DTP shall not commence Preliminary Engineering Work until the conditions precedent set forth below have been satisfied or waived in writing and the Department has issued a Notice to Proceed.

(c) Conditions precedent to the Notice to Proceed for Preliminary Engineering Work include:

(i) Federal Transit Administration approval to perform Preliminary Engineering Work for each Phase.

(ii) Funding availability as determined by the Department for each Phase.

(iii) Department approval in writing of scope, schedule and pricing for Preliminary Engineering Work for each Phase.

(iv) Delivery by DTP of commitment letter[s] for all insurance requirements.

(v) The Notice to Proceed for Development Work shall have been delivered.

Section 4.2. Preliminary Engineering Work Milestones.

The Department and DTP shall cooperate to achieve the review periods and milestones for Preliminary Engineering Work as set forth in **Exhibit G-1**, Section 5.0, Review of Preliminary Engineering Work Products, and Section 6.0 Deliverables, Table 1, and outlined below:

(a) Phase 1 Preliminary Engineering Work Milestones:

(i) DTP submission of 50% complete Phase 1 Preliminary Engineering Plans and Specifications in accordance with the approved Master Project Schedule, as set forth in Section 6.0 Deliverables, Table 1.

(ii) Department and DTP shall follow the review process for Phase 1 as set forth in the Preliminary Engineering Scope of Work, Section 5.0.

(iii) DTP submission of the 95% complete Phase 1 Preliminary Engineering Plans and Specifications will be in accordance with the approved Master Project Schedule, as set forth in Section 6.0 Deliverables, Table 1.

(iv) Department shall provide written comments of the 95% complete Phase 1 Preliminary Engineering Plans and Specifications within 15 days after DTP submission and DTP shall deliver minutes of the review conference with responses to all comments within 10 days after the review conference.

(v) DTP submission of 100% Phase 1 Preliminary Engineering Plans and Specifications within 450 days of Notice to Proceed for Preliminary Engineering Work.

(vi) DRPT approval or disapproval of 100% Phase 1 Preliminary Engineering Plans and Specifications within 10 Business Days after DTP submission.

(b) Phase 2 Preliminary Engineering Work Milestones:

(i) DTP submission of 50% complete Phase 2 Preliminary Engineering Plans and Specifications in accordance with the approved Master Project Schedule, as set forth in Section 6.0 Deliverables, Table 1.

(ii) Department and DTP shall follow the review process of Phase 2 as set forth in the Preliminary Engineering Scope of Work, Section 5.0.

(iii) DTP submission of the 95% complete Phase 2 Preliminary Engineering Plans and Specifications will be in accordance with the approved Master Project Schedule, as set forth in Section 6.0 Deliverables, Table 1.

(iv) Department shall provide written comments of the 95% complete Phase 2 Preliminary Engineering Plans and Specifications with in 15 days after DTP submission and DTP shall deliver minutes of the review conference with responses to all comments within 10 days after the review conference.

(v) DTP submission of 100% Phase 2 Preliminary Engineering Plans and Specifications within 650 days of Notice to Proceed for Preliminary Engineering Work.

(vi) DRPT approval in writing of 100% Phase 2 Preliminary Engineering Plans and Specifications within 10 Business Days after DTP submission.

Section 4.3. Project Standards and Deviations.

(a) DTP shall use its best efforts to identify any deficiencies in any required Department, VDOT or WMATA design standard as identified in the Basis of Design Report prepared by DTP in accordance with **Exhibit G-1**. The Project Standards for Preliminary Engineering shall be the WMATA design standards and criteria set forth in **Exhibit G-1** in Section 3.0 thereof. The parties acknowledge that DTP may request that the General Plans or the Project Standards for Preliminary Engineering may be changed during the course of the Preliminary Engineering Work.

(b) The DTP may recommend a Deviation to the Standards Board. The Standards Board will be composed of the Project Executive Director for DTP or his designee, the Project Director for the Department or his designee and the Director of the Office of Extensions for WMATA or his designee. Decisions of the Standards Board shall be by unanimous vote of all members of the Standards Board.

(c) DTP may apply in writing to the Standards Board for a Deviation. Whenever DTP applies for a Deviation, it shall concurrently submit (i) an explanation outlining the purpose of the proposed Deviation, (ii) itemization of the specific portion of the relevant plans and specifications or standards which must be changed if the proposal is approved, (iii) the date or time by which final approval by the Department of the proposed Deviation must be issued in order to obtain maximum cost reduction or time savings, if any, and (iv) cost estimates comparing the estimated cost impact if the Deviation is approved. DTP may request a Change Order permitting DTP to suspend related Preliminary Engineering Work until final approval by the Department of the proposed Deviation is granted, which Change Order the Department may grant or deny in its sole discretion.

(d) The Standards Board shall have no obligation to approve any applications for Deviations. DTP has the burden of persuading the Standards Board and, if applicable, the WMATA Design Control Board that the requested Deviation: (i) is equivalent in safety with the relevant standards or plans and specifications; (ii) is recognized as good industry practice for comparable facilities; (iii) will not cause any material increase in operating and life-cycle costs for the completed Project; and (iv) is reasonably likely to achieve the estimated cost impact, including any savings.

(e) Deviations shall only be deemed approved if the Standards Board provides written approval, such Deviation has been approved by all other entities, if any, identified by the Standards Board, and the Department has issued final written approval of the Deviation.

(f) When the Standards Board approves a Deviation, the Standards Board shall identify any other entity whose approval of the Deviation is required. If approval of the WMATA Design Control Board is required, the Department shall forward such proposed Deviation to the WMATA Design Control Board for approval. Deviations from the General Plans and Project Standards for Preliminary Engineering require approval by the WMATA Design Control Board (and, in some cases, also the WMATA Board of Directors). The Department will request WMATA to convene the WMATA Design Control Board within 120 days after Notice to Proceed for Preliminary Engineering Work, but not later than 30 days after submission by DTP of its Value Planning Report.

(g) As part of the Department’s final approval of a Deviation, the Department and DTP shall agree on the amount of Realized Cost Savings resulting from such Deviation.

(h) DTP may withdraw its request for a Deviation at any time.

Section 4.4. Department Review.

(a) DTP shall provide the Department and its designees with the opportunity to perform reviews of the Preliminary Engineering Plans and Specifications in progress as determined by the Department. Individuals designated by the Department shall be co-located with DTP in the Project Office. The reviews will be conducted in the Project Office or at other locations in the Project Right of Way where Work is being performed, and in the presence of DTP personnel, with the intent to minimize disruption of on-going Preliminary Engineering Work. The reviews may be of, but are not limited to, progress prints, computer images, draft documents, working calculations, draft specifications or reports or other design documents as determined by the Department.

(b) The Department and its designees shall have the periods specified in the Scope of Work in **Exhibit G-1** after DTP's formal submission to issue comments or proposed changes or to approve or disapprove DTP's Preliminary Engineering Plans and Specifications at 50% and 95% level of completion. The Department shall review all other DTP Preliminary Engineering Work deliverables and submittals in the timeframes developed as a part of the Master Project Schedule required by **Exhibit G-1**, Table 1. The Department shall review and approve or disapprove any other item of Preliminary Engineering Work requiring such review and approval or disapproval for which a time period is not provided in the Master Project Schedule within 14 days after submission, unless the Department notifies DTP within 14 days that more time is required and the reason for the need for additional time. The Department shall endeavor to reasonably accommodate DTP's request to assist DTP in obtaining the required approvals or comments of any other governmental entities (including, but not limited to, VDOT, MWAA, Fairfax County and Loudoun County) in accordance with Section 5 of **Exhibit G-1** within the above stated time limits. The Department shall endeavor to reasonably accommodate DTP's requests for a quick turnaround of specific submittals.

Section 4.5. Changes to the Project Definition in the Revised Local Preferred Alternative (Revised LPA).

Following the approval of the Revised Locally Preferred Alternative by the Commonwealth Transportation Board, the Department and DTP will conduct a joint review of any changes and refinements to the Project definition that served as the basis of the Preliminary Engineering Pricing and Compensation in **Exhibit G-2**. DTP will identify and document the additional effort required, if any, to complete the Preliminary Engineering Work in accordance with the Revised Locally Preferred Alternative. The Department may also identify elements of the Project that shall be deferred until such time as those elements are formally adopted as part of the Project. Any adjustments to the agreed price for the Preliminary Engineering Work or adjustments to the Preliminary Engineering Work Milestone Dates as a result of the additional effort required or elements deferred will be made in accordance with the Change Order provisions set forth in **Section 7.2(d)(iii)**.

ARTICLE V

DEVELOPMENT

Section 5.1. DTP Obligations to Perform Development Work.

(a) DTP shall support financing, acquire Regulatory Approvals (other than the Department Governmental Approvals), negotiate third-party and utility agreements, support community relations and perform other services as described in greater detail in **Exhibit F-1** with respect to Phase 1 and **Exhibit H** with respect to Phase 2 and acquire properties when authorized by the Department all in accordance with this Agreement or any other Project Agreements. All Development Work shall be performed pursuant to the issuance of the Core Development Work Notice to Proceed, authorizations to proceed for Incremental Development Work, and task orders for the Tasked Development Work.

(b) DTP shall not commence performance of the Core Development Work until the conditions precedent set forth below have been satisfied or waived in writing and the Department has issued a Notice to Proceed.

(c) Conditions precedent to the Notice to Proceed for Core Development Work include:

(i) Federal Transit Administration approval to perform Development Work for each Phase, as appropriate.

(ii) The Department shall determine, in its sole discretion that sufficient funding is available or reasonably expected to be available.

(iii) Delivery by DTP of commitment letter[s] for all insurance requirements.

(d) Notwithstanding the provisions of Subsection (c), DTP shall not proceed with the Incremental Development Work unless it first receives a written authorization to proceed from the Department, and DTP shall not proceed with any Tasked Development Work unless the Department issues a task order therefor.

(e) DTP shall provide the Department and its designees with the opportunity to perform reviews of the Development Work in progress as determined by the Department. Individuals designated by the Department shall be co-located with DTP in the Project Office. The reviews will be conducted in the Project Office or at other locations in the Project Right-of-Way where Development Work is being performed, and in the presence of DTP personnel, with the intent to minimize disruption of on-going Development Work.

Section 5.2a. Development Work Milestones.

The following are the Milestone Dates for Development Work:

(a) Submission of the Value Planning Report within 90 days after Notice to Proceed for Development Work; and

(b) Approval or disapproval by the WMATA Design Control Board of recommended Deviations from the General Plans or the Project Standards for Preliminary Engineering identified in the Value Planning Report within 30 days after DTP's submission thereof.

Section 5.2. Commencement of Core Development Work, Incremental Development Work and Tasked Development Work.

(a) The "Core Development Work" consists of: (i) the Development Work set forth in **Exhibit F-1** and **F-2** performed by the project executive director, project director, executive assistant, principal policy relations manager, law firms with respect to general legal support described in **Exhibit F-1** and **F-2**, ROW coordinator, QA/QC manager, environmental coordinator, business controls manager, cost/schedule engineer, accountant, oracle/prolog assistant, technical program manager, commercial manager, financial manager; utility coordinator, office/facility manager, IT network coordinator, document control coordinator and 2 receptionists; (ii) the Other Direct Costs associated with sub-item (i); (iii) the establishment of the office and facilities and the Other Direct Costs associated therewith and (iv) value planning. DTP shall not commence performance of the Core Development Work until the Department issues a Notice to Proceed in accordance with **Section 5.1(c)**.

(b) The "Incremental Development Work" consists of the Development Work set forth in **Exhibit F-1** and **F-2** performed by the community and public relations consultant, environmental consultant, permitting manager; utility coordination consultant, ROW acquisition agent, law firms with respect to commercial legal support described in **Exhibit F-1** and **F-2**, and financial advisor. The Incremental Development Work shall not proceed until the Department issues written authorization to commence such work.

(c) The "Tasked Development Work" consists of the following Development Work set forth in **Exhibit F-1** and **F-2**: stakeholder relations; development relations; permitting support; technical legal support; financing legal support and stakeholder support. Tasked Development Work shall not be performed unless and until the Department issues a task order therefor. Each task order shall set forth the scope of work, cost, schedule, staffing plan, activities and milestones to be met.

(d) Phase 2 Development Work. Phase 2 Development Work Scope and Milestones shall be contained in **Exhibit H** to be added by Phase Supplement prior to the Notice to Proceed for Phase 2 Development Work.

Section 5.3. Key Personnel.

The Department shall have the right to approve all Key Personnel, and DTP shall not replace any Key Personnel without the prior written consent of the Department.

Section 5.4. Financing of Project.

(a) Prior to the Agreement Date, DTP provided the Department with inputs used in the Project Financial Plan for Phase 1 and a conceptual financial plan for Phase 2. The estimates of the cost for the Phase 1 and 2 Design-Build Work and expenses to be incurred by the Department are based upon estimates developed in the DEIS and do not represent any agreement on a final Contract Price for the Phase 1 or Phase 2 Design-Build Work.

(b) The Department hereby expresses "official intent" within the meaning of Treasury Regulations Section 1.150-2 promulgated under the Code to utilize the proceeds of tax exempt bonds in the estimated maximum principal amounts expected to be issued set forth in the Project Financial Plan to pay costs of the Project and to use such proceeds to reimburse any such costs incurred prior to issuance of any such bonds.

Section 5.5. DTP Right-of-Way Obligations.

(a) DTP shall be responsible for developing a Right-of-Way Acquisition Plan and acquiring the Project Right-of-Way as specified in **Article V** and **Exhibit F-1**.

(b) DTP shall not proceed with any appraisals, deployment of relocation specialists, or negotiation of acquisition or conveyance terms or acquisitions for a Phase until it receives the Department's written approval and authorization, based upon WMATA's written confirmation of the minimum real estate requirements for the Project.

(c) In performing the Right-of-Way acquisitions, DTP shall comply with all Laws, Regulations and Ordinances applicable to Right-of-Way acquisitions by Department, including the Uniform Relocation Assistance and Real Property Acquisition Policies Act, as amended, 42 U.S.C. Section 4651 et seq. and any amendments thereto, as supplemented by the regulations of 49 C.F.R., Part 24, and Title 25.1, Chapter 4, Section 25.1-400 et seq., Code of Virginia and regulations set out in 24 VAC 30-41-10 *et seq*. If a conflict arises between Federal law and regulations and State law and regulations, this fact shall be reported timely to the Department for its assessment and direction. DTP's activities shall also be in substantial conformity with the Virginia Department of Transportation (VDOT) *Manual of Instruction – Right-of-Way Acquisitions*.

(d) All real property interests that DTP acquires for the Project shall be acquired by DTP as agent of the Department for purposes of acquiring property only. Such interests shall be fee simple title, leasehold, easement, or such other real property interest approved in writing by the Department, and shall be conveyed by a general warranty deed (unless otherwise approved in writing by the Department or lease agreement or easement), subject only to conditions of title that may be approved in writing by the Department in its sole discretion. Permanent easements for drainage or slopes, utility easements, limited access rights, and temporary construction easements shall be included as part of the same transfer document or be transferred by separate instrument, when so indicated in the Right-of-Way Acquisition Plan.

(e) All persons or firms DTP intends to use in performing any portion of the Right-of-Way acquisitions shall meet the VDOT's Consultant Pre-qualification Guidelines.

(f) DTP shall perform Phase II environmental assessments, investigations and studies in accordance with the requirements of **Section 5.9** of this Agreement on property to be acquired for the Right-of-Way. DTP shall notify the Department of any recommendations and conclusions contained in the studies conducted pursuant to **Section 5.9** pertaining to the property to be acquired for the Right-of-Way to allow the Department to consider whether and in what form it wishes title to be acquired.

(g) DTP shall cause all persons performing acquisition activities by or on behalf of DTP to maintain a complete, legible diary of each contact with a property owner or his or her representative (which may be maintained electronically). The diary shall include the time, place, amount of offer, identification of the party (ies) to whom any offer is made, all parties present, and the response of the owner or its representative. All parcels are to be set up and tracked in VDOT's Right-of-Way and Utilities System (RUMS) (RUMS training to be provided by VDOT upon request from DTP). The diary is to be retained for DTP's permanent records and made available to the Department upon request. In addition, DTP shall furnish to the Department, upon request, miscellaneous correspondence and written recommendations regarding future negotiations.

(h) Upon reasonable notice, all persons performing acquisition activities by or on behalf of DTP shall be available for consultation and testimony (including discussion of diary notes and acquisition events) with the Department representatives during and after completion of acquisitions.

(i) Except for disclosures to the Department or to attorneys designated and appointed by the State Attorney General and other disclosures first approved or directed by the Department in writing, DTP shall keep strictly confidential and not disclose any diaries, notes, correspondence, documents, agreements, appraisals or other information pertaining to or arising out of DTP's acquisition work and activities except as required by law or order of any court. Should such records become subject of a request for public disclosure, DTP shall immediately notify the Department of such request and the date by which any response is due in order to give the Department an opportunity, if it so determines, to oppose the request and seek appropriate legal relief.

(j) All purchase costs or payments for leases or easements in connection with acquisition of Right-of-Way shall be paid directly by the Department in accordance with **Section 5.10**. The Master Project Schedule for a Project Phase shall set forth the dates by which DTP anticipates acquiring the properties specified in the Right-of-Way Acquisition Plan for each such Project Phase. DTP shall not acquire any Right-of-Way until it receives authorization by the Department.

Section 5.6. Right-of-Way Acquisition Plan and Right-of-Way Plans.

(a) Prior to commencement of Right-of-Way acquisition activities with respect to any Project Phase, DTP shall prepare a Right-of-Way Acquisition Plan for such Project Phase, which shall be approved by the Department.

(b) The Right-of-Way Plans are required to be approved by the Department and confirmed by WMATA for the minimum Right-of-Way requirements for transit operation, maintenance and constructability prior to any acquisition of property. If the Department disapproves any such Plans, it shall indicate in writing the reasons for such disapproval. Provided, however, the Department’s failure to provide written approval or disapproval within the specified time shall not be deemed an approval. If disapproved, DTP shall submit revised Right-of-Way Plans, incorporating the Department’s comments.

(c) In the event that DTP desires to obtain any parcels not covered by the approved Right-of-Way Acquisition Plan and/or Right-of-Way Plans, DTP shall submit a revision to the Right-of-Way Acquisition Plan and the Right-of-Way Plans to the Department, and shall obtain the Department's written approval thereof prior to undertaking any negotiations or other acquisition work with respect to any new parcels to be obtained pursuant to the revised plans. For each new parcel, DTP shall not initiate acquisition activities until the Department has received WMATA’s written confirmation that the parcel meets the real estate requirements of the Project.

(d) In connection with the acquisition of parcels covered by the Right-of-Way Acquisition Plan, DTP shall submit to the Department for approval appraisals of all such parcels. To the extent the Department disapproves an appraisal, it shall communicate in writing the specific reasons for such disapproval within the time period set forth above. Provided, however, the Department's failure to approve or disapprove any appraisal in writing within the specified time shall not be deemed an approval. Once an appraisal has been approved as described above, DTP may offer an additional amount in an attempt to reach a voluntary settlement as authorized in writing by the Department.

(e) In connection with obtaining the leasehold interests or easements for parcels covered by the approved Right-of-Way Acquisition Plan, DTP shall submit to the Department for approval or disapproval of the appraisal reports of all such parcels.

Section 5.7. Acquisition by Condemnation.

(a) DTP may request the Department to initiate eminent domain proceedings only after complying with the requirements for negotiations as indicated in the approved Right-of-Way Acquisition Plan. DTP shall enter the legal description of the parcel, and the appraisal information and negotiation information in the VDOT Right-of-Way and Utilities Management System (RUMS) (RUMS training to be provided by VDOT upon request from DTP), and submit to the Department a complete Condemnation Package as described in subparagraph (b), below. DTP shall be responsible for making available condemnation witnesses, including experts, as may be requested by the Office of the Attorney General in all eminent domain proceedings. All attorneys' fees, trial costs, and costs of pre-trial and trial testimony by witnesses and experts shall be paid by the Department. The Department shall be responsible for determining if exceptions to the award are to be filed and further legal actions are warranted. The Department shall be responsible for making any condemnation award payments.

(b) For any property for which DTP has requested the Department to initiate eminent domain procedures, DTP shall provide the following documents (collectively, "Condemnation Package"):

(i) A request for initiation of condemnation proceedings signed by an authorized representative of DTP, identifying the parcel and certifying that the requirements for negotiations and the approved Right-of-Way Acquisition Plan have been satisfied;

(ii) A copy of DTP's written offer to the property owner and any written response from the owner or its representative;

(iii) A legal description of the parcel;

(iv) A fair market value appraisal, reviewed and approved by the Department;

(v) A 60-year title examination by individuals or entities approved by the Department (including copies of documents identified in all exceptions listed therein and a plat of all easements identified therein); and

(vi) Studies and analyses required by **Section 5.9**, including, in the event that the studies and analyses show any Hazardous Substances within the real property interest to be conveyed, a copy of any proposed conceptual remediation or containment plan and, if then available, the approval thereof by the Department of Environmental Quality or the United States Environmental Protection Agency as described in **Section 5.9**.

(c) Within fifteen (15) days after receiving a Condemnation Package in compliance with the requirements of **Section 5.7(b)** and applicable Laws, Regulations and Ordinances, the Department shall proceed with condemnation.

(d) Eminent domain proceedings shall be prosecuted by the Office of the Attorney General though designated appointed counsel. The Department shall have sole discretion with respect to all decisions regarding the settlement of any eminent domain proceeding.

Section 5.8. Acquisitions by Negotiation and Conveyances to Department.

(a) Title to property shall be acquired in the name of the Commonwealth of Virginia, or in the name as shown on the Right-of-Way Acquisition Plan. For any property to be acquired, DTP shall provide the following documents (collectively, "Acquisition Package"):

(i) A copy of the conveyance and other closing documents;

(ii) Fair market value appraisal reviewed and approved by the Department meeting Department's requirements and showing a value, which supports the acquisition price;

(iii) For all parcels where fee simple title is being acquired or where the consideration is greater than $10,000 for any type of property rights being acquired other than temporary construction easements, an American Land Title Association (ALTA) extended coverage owner's policy of title insurance (1992 or 1970 form) issued by a title insurance company acceptable to Department (including copies of documents identified in all exceptions listed therein and a plat of all easements identified therein); and

(iv) The studies and analyses required by **Section 5.9**, including, in the event that the studies and analyses show any Hazardous Substances within the real property interests to be conveyed, a copy of any proposed remediation or containment plan, and if then available, the approval of such plan by the Department of Environmental Quality or the United States Environmental Protection Agency as described in **Section 5.9**.

(b) The Department will pre-approve forms to be used for purchase agreements and conveyance documents so that only the business terms and any revisions to the pre-approved forms will require written approval by the Department.

(c) DTP shall ensure that the conveyance documents are recorded and that Department receives a complete set of closing documents within sixty (60) days following the closing.

Section 5.9. Hazardous Substance Investigations.

(a) DTP shall review Phase I Environmental Site Assessment reports prepared by the Department, and in the event that additional studies are recommended, DTP shall develop the minimum standards and cost estimates for such further studies and analyses for review and approval of both minimum standards and cost estimates by the Department. The minimum standards shall also include an analysis of naturally occurring asbestos containing soils identified on the Fairfax County Real Properties Identification Maps (Soils 1961). DTP shall cause additional studies and analyses to be performed. The costs of additional studies or Phase II Environmental Investigations shall be funded by the Department on a task order basis.

Such Phase II Environmental Investigations shall constitute all appropriate inquiry into the previous ownership and uses of the property consistent with good commercial and customary practice as defined in 42 U.S.C. Section 9601(35)(B), as amended. DTP shall submit a summary of results from each investigation to the Department. The deliverables shall include a narrative summary, site diagrams, results in tabular form, and recommendations, including recommendations for property acquisition, with sufficient justification for Department to judge necessity and scope of work if additional studies are deemed necessary.

(b) In the event that such studies and reports indicate the presence of Hazardous Substances on the property, the Department's Project Director or his or her designated representative shall determine whether the Department is willing to consider an acquisition notwithstanding the presence of such Hazardous Substances and if so, on what basis (easement, lease, etc.).

(c) If Department is willing to consider the acquisition, DTP shall, in accordance with **Section 5.9(e)**, assist the Department's CMMR Contractor to obtain approval of any containment, management, mitigation or remediation plans, and estimates to perform these services, from the Department prior to the submittal of the Department approved plans to the Department of Environmental Quality or the United States Environmental Protection Agency, or otherwise coordinate its activities through these agencies.

(d) If the Department determines that it is not willing to proceed with the acquisition in accordance with **Article V** or that the requirements associated with containment, mitigation or remediation are unacceptable, the Department shall notify DTP and DTP shall identify alternative property acceptable to the Department. In the event that the Department is unwilling to acquire contaminated property, DTP shall be eligible for a Change Order with respect to cost of redesign and working around the contaminated site and/or a time extension to the extent such work affects the Critical Path, to the extent provided in **Article VII**. In addition, additional time made necessary by the selection of alternate property shall be the subject of a Change Order.

(e) DTP shall not knowingly transfer to the Department any contaminated property without a containment, management, mitigation or remediation plan, or demonstration that the levels of contamination are insignificant from a human health or an environmental protection standpoint and approval or otherwise concurrence of such containment or remediation plan by the Department, and, if then available, the concurrence of such plan by the appropriate federal and state regulatory agencies. The Department shall contract directly with other contractors selected by the Department for the containment, management, mitigation disposal and remediation of Hazardous Substances ("CMMR Services"). DTP shall assist the Department in developing the scope of work for CMMR Services and shall provide detailed quantity estimates of materials for bid quantity sheets to be included in the Department's request for bids or proposals for CMMR Services. DTP shall not be responsible for directing the means and methods of the CMMR Contractor in carrying out its work.

(f) An asbestos inspection shall be conducted on each structure located on all acquired right-of-way in accordance with standard industry inspection protocols. No inspection shall be performed on structures that have not been acquired and vacated. Copies of inspection reports and estimates for abatement shall be submitted to the Department for review and approval.

Section 5.10. Acquisition Costs. The amounts to be paid to a property owner in connection with a negotiated acquisition or condemnation, including relocation costs, if any, shall be paid directly by the Department. Notwithstanding the foregoing, DTP shall be responsible, at its own cost and expense as part of the Contract Price for Design-Build Work for a Phase, without any additional entitlement to reimbursement, for acquisition of any property or temporary easements or other property rights outside of the Right-of-Way limits which DTP determines is necessary to accommodate its construction methods, or to facilitate temporary utility relocations required under the Design-Build Contract.

Section 5.11. Changes in Project Right-of-Way Limits. Department's prior written consent is required for any changes in the approved Right-of-Way limits as shown on the Right-of-Way Plans.

Section 5.12. Residue Parcels. Whenever indicated on the approved Right-of-Way Plans or when determined by DTP during negotiation, uneconomic residue parcels, to the extent possible by Laws, Regulations and Ordinances, may, with the Department’s written approval, be acquired as part of the acquisition. To extent required by Laws, Regulations and Ordinances, DTP shall acquire residue parcels on behalf of the Department in the same manner as other parcels in the Right-of-Way are acquired hereunder. All residue parcels acquired in connection with the Project shall be conveyed to Department for management and disposal. These properties shall be the sole property of the Department and managed by the Department. DTP shall at no time be allowed to sell any of these residue parcels. In addition, DTP will be required to set up in RUMS all acquisition parcels that result in residue parcels. The Department shall be responsible for maintaining a residual parcel inventory.

Section 5.13. Department Review.

The Department shall review and approve or disapprove the Development Work as established in **Exhibit F-1**, or as developed in the Master Project Schedule as described in **Exhibit F-1**, Section 2.2. The Department shall review and approve or disapprove any other item of Development Work requiring such review and approval or disapproval for which a time period is not provided in the Master Project Schedule within 10 Business Days after submission, unless the Department notifies DTP within 10 Business Days that more time is required and the reason for the need for additional time. The Department shall endeavor to reasonably accommodate DTP's request to assist DTP in obtaining the required approvals or comments of any other governmental entity (including, but not limited to, WMATA, VDOT, MWAA, Fairfax County and Loudoun County) within the above stated time limits. Department shall also endeavor to reasonably accommodate DTP's request for a quick turnaround of specific submittals.

ARTICLE VI

PRICING AND PAYMENT FOR DEVELOPMENT AND PRELIMINARY ENGINEERING WORK

Section 6.1. Payment for Development Work and Preliminary Engineering Work.

(a) DTP shall perform the Preliminary Engineering Work for Phase 1 and Phase 2 for a Fixed Price as set forth in **Exhibit G-2**. DTP shall be paid for such Preliminary Engineering Work in accordance with the Preliminary Engineering Schedule of Values set forth in **Exhibit G-2**. DTP shall not be entitled to payment for any amounts for Preliminary Engineering Work that would cause the aggregate payments to DTP for Preliminary Engineering Work to any date to exceed the amount set forth for such date in the Preliminary Engineering Maximum Payment Curve set forth in **Exhibit G-2**. Payments of amounts in excess of the amount permissible under the Preliminary Engineering Maximum Payment Schedule shall be deferred until the next succeeding payment when such payment is allowed under the Preliminary Engineering Maximum Payment Curve.

(b) DTP shall perform the Phase 1 Core Development Work on a cost reimbursable basis plus fee in accordance with **Exhibit F-2**. DTP shall perform the Phase 1 Incremental Development Work on a cost reimbursable basis plus fee in accordance with **Exhibit F-2**. DTP shall perform the Phase 1 Tasked Development Work in accordance with the applicable task orders.

(c) DTP shall perform the Phase 2 Development Work and its compensation therefor shall be determined and added by Phase Supplement prior to Notice to Proceed for the Phase 2 Development Work.

(d) DTP has agreed to defer reimbursement of $15 million in Preliminary Engineering Work and Development Work costs (“Deferred Costs”) in the aggregate for the Phase 1 Development Work and Phase 1 and 2 Preliminary Engineering Work. Costs incurred by DTP after April 23, 2003 pursuant to task orders issued by the Department shall be counted towards the $15 million in Deferred Costs. The percentage of the overall invoiced costs for Phase 1 Development Work and Phase 1 and 2 Preliminary Engineering Work subject to deferral on a monthly basis is 25% until the $15 million in Deferred Costs has been achieved. DTP shall not be obligated to defer any costs associated with Phase 1 Development Work after Notice to Proceed for Phase 1 Design-Build Work, provided that the full $15 million in Deferred Costs has been achieved.

Upon issuance of the Notice to Proceed for Phase 1 Design-Build Work, DTP shall be entitled to submit an Invoice for the total amount of all Deferred Costs (without interest) for Phase 1 Development Work and Phase 1 Preliminary Engineering Work, and the Department shall pay DTP such Deferred Costs.

Upon the Department's approval of the Phase 2 100% complete Preliminary Engineering Work, DTP shall be entitled to submit an Invoice for the total amount of all Deferred Costs (without interest) for Phase 2 Preliminary Engineering Work, and the Department shall pay DTP such Deferred Costs.

Notwithstanding the foregoing in the event that a Notice to Proceed for Phase 1 Design-Build Work is not issued within 1,095 days after the Notice to Proceed for Preliminary Engineering Work and the failure to issue such Notice to Proceed is not due to a DTP Default, DTP shall be entitled to submit an Invoice to the Department for all Deferred Costs for Phase 1 Development Work and Phase 1 and 2 Preliminary Engineering Work incurred, but not previously paid (without interest), and the Department shall pay DTP such Deferred Costs.

The timing of the Department's payment of Deferred Costs after receipt of an Invoice therefor shall be governed by **Section 6.6**.

(e) DTP has agreed to defer reimbursement of $10 million in costs for the Phase 2 Development Work; provided, however that DTP shall not be obligated to defer any costs for Phase 2 Development Work until all the following have occurred:

(i) Notice to Proceed for Phase 1 Design-Build Work has been issued to DTP;

(ii) all Deferred Costs required to be paid at Notice to Proceed for Phase 1 Design-Build Work in accordance with this Section have been paid to DTP by the Department; and

(iii) the parties mutually agree that the implementation of Phase 2 is likely within a reasonable period of time.

The percentage of the overall invoiced costs for Phase 2 Development Work subject to a 25% deferral on a monthly basis until the $10 million in Deferred Costs has been achieved until the anticipated Notice to Proceed for Phase 2 Design-Build Work and will be set forth in **Exhibit H-2** to be added by Section Supplement. DTP shall not be obligated to defer any costs associated with Phase 2 Development Work after Notice to Proceed for Phase 2 Design-Build Work. The timing of the Department's payment of such Deferred Costs shall be governed by **Section 6.6**.

Upon issuance of the Notice to Proceed for Phase 2 Design-Build Work, DTP shall be entitled to submit an Invoice for the Deferred Costs (without interest) for Phase 2 Development Work, and the Department shall pay DTP such Deferred Costs.

Notwithstanding the foregoing in the event that a Notice to Proceed for Phase 2 Design-Build Work is not issued within 1,095 days after Substantial Completion of the

Phase 1 Design-Build Work and the failure to issue such Notice to Proceed is not due to a DTP Default, DTP shall be entitled to submit an Invoice to the Department for all Deferred Costs for Phase 2 Development Work (without interest) incurred but not previously paid, and the Department shall pay DTP such Deferred Costs.

(f) To compensate DTP for costs incurred or committed to mobilize under this Agreement, the Department shall pay mobilization payments for Development Work and Preliminary Engineering Work. For Development Work, the mobilization amount is presented in **Exhibit F-2**. For Preliminary Engineering Work the mobilization amount is presented in **Exhibit G-2**. Payments to DTP for each mobilization shall be made by the Department in two equal payments. The first Invoice for Development Work mobilization shall be submitted at least 30 days in advance of the anticipated Notice to Proceed for Development Work, and shall be paid within 15 days of the Notice to Proceed for Development Work. The second Invoice for Development Work mobilization shall be submitted at Notice to Proceed for Development Work. The first Invoice for Preliminary Engineering mobilization shall be submitted at least 30 days in advance of the anticipated Notice to Proceed to perform Preliminary Engineering Work, and shall be paid within 15 days of the Notice to Proceed for Preliminary Engineering Work. The second Invoice for Preliminary Engineering Work mobilization shall be submitted at Notice to Proceed to perform Preliminary Engineering Work. All mobilization payments shall be subject to Deferred Costs under **Section 6.1(d)** above. All Invoices for mobilization payments shall include mutually agreeable documentation.

Section 6.2. Payment for Design-Build Work. DTP's compensation for the performance of the Design-Build Work shall be governed by the Design-Build Contract.

Section 6.3. Payment of Approved Pre-CA Costs.

(a) Prior to the Agreement Date, DTP incurred Pre-CA Costs to develop the Project. Within 30 days after the Agreement Date, DTP shall submit to the Department for review and approval by the Department the Pre-CA Costs incurred through the Agreement Date. If Pre-CA Costs are not submitted within such 30-day timeframe, those costs shall not be paid. Costs incurred by DTP after April 23, 2003 pursuant to task orders issued by the Department shall not constitute Pre-CA Costs.

The total amount of approved Pre-CA Costs shall be added as a supplement to this Agreement as **Exhibit K** (“Approved Pre-CA Costs”).

(b) In determining whether to approve Pre-CA Costs for payment, the Department shall use the following criteria:

(i) Were the costs incurred for non-business development purposes (ineligible costs include preparation of proposal and proposal documents, lobbying efforts and other efforts for DTP to promote its efforts to obtain an award of this Agreement)

(ii) Were the costs incurred to generate quantifiable products; or

(iii) Were the costs reasonable in terms of meeting attendance and staffing levels.

(c) The Department's Director, Administration and Capital Projects Division, shall make a written determination of allowable Pre-CA Costs to be reimbursed to DTP. The determination of the Department's Director, Administration and Capital Projects Division, shall be appealable by DTP to the Department's Executive Director, whose decision shall be final and not appealable. In connection with such appeal, DTP shall be permitted to make an oral and/or written presentation of its position.

(d) Upon issuance of the Notice to Proceed for Phase 1 Design-Build Work, DTP shall be entitled to submit an Invoice for the Approved Pre-CA Costs, and the Department shall pay DTP for the Approved Pre-CA Costs. The timing of the Department's payment of the Approved Pre-CA Costs shall be governed by **Section 6.6**. If the Department fails to issue a Notice to Proceed for Phase 1 Design-Build Work, DTP shall not be entitled to be reimbursed for the Approved Pre-CA Costs, except as set forth in **Section 12.6**.

Section 6.4. Not used.

Section 6.5. Incentive Payments.

(a) In recognition of the benefits associated with DTP's Development Work and Preliminary Engineering Work, the Department has agreed to compensate DTP in the form of a Incentive Payments in the event that DTP achieves certain significant milestones by specified dates or achieves certain cost reductions as specified below.

(b) The "Typical Agency D/B Approach Price Date" shall be that date that is 420 days after the Department's approval of the 100% complete Phase 1 Preliminary Engineering Plans and Specifications. DTP shall be entitled to receive an incentive payment in an amount equal to $1 million for every 30-day increment by which DTP delivers a Fixed Price Proposal, for Phase 1 Design-Build Work earlier than the Typical Agency D/B Approach Price Date, less 90-days, up to a maximum of $8 million.

The schedule of incentive payments associated with delivery of a Fixed Price Proposal is as follows. If a Fixed Price Proposal is submitted:

(i) 91 to 120 days sooner than the Typical Agency D/B Approach Price Date, DTP shall receive $1 million;

(ii) 121 to 150 days sooner than the Typical Agency D/B Approach Price Date, DTP shall receive $2 million;

(iii) 151 to 180 days sooner than the Typical Agency D/B Approach Price Date, DTP shall receive $3 million;

(iv) 181 to 210 days sooner than the Typical Agency D/B Approach Price Date, DTP shall receive $4 million;

(v) 211 to 240 days sooner than the Typical Agency D/B Approach Price Date, DTP shall receive $5 million;

(vi) 241 to 270 days sooner than the Typical Agency D/B Approach Price Date, DTP shall receive $6 million;

(vii) 271 to 300 days sooner than the Typical Agency D/B Approach Price Date, DTP shall receive $7 million; and

(viii) More than 300 days sooner than the Typical Agency D/B Approach Price Date, DTP shall receive $8 million.

(c) The "Typical Agency D/B Approach Execution Date" shall be that date that is 510 days after the Department's approval of the 100% complete Phase 1 Preliminary Engineering Plans and Specifications. DTP shall be entitled to receive an incentive payment in an amount equal to $1 million for every 30–day increment by which the Design-Build Contract for Phase 1 is executed earlier than the Typical Agency D/B Approach Execution Date, less 150-days, up to a maximum of $7 million as described below. The Design-Build Contract shall be negotiated in good faith, including a firm fixed price, CPM Schedule, Schedule of Values, Maximum Payment Curve, Guaranteed Testing Readiness Date, Guaranteed Substantial Completion Date, and Guaranteed Final Completion Date. The Design-Build contract shall be deemed "executed" for purposes of this **Subsection (c)** if it shall have been signed by DTP and be acceptable for execution by the Department. Payment of the incentive payment shall not depend upon the issuance of a federal Full Funding Grant Agreement. If for reasons beyond the control of the Department, the Department cannot then execute the Design-Build Contract, the Department shall then immediately deem that the Design-Build Contract has achieved executed status for purposes of calculating this incentive payment. The schedule of incentive payments associated with execution of the Design-Build Contract is as follows. If the Phase 1 Design-Build Contract is executed:

(i) 151 to 180 days sooner than the Typical Agency D/B Approach Execution Date, DTP shall receive $1 million;

(ii) 181 to 210 days sooner than the Typical Agency D/B Approach Execution Date, DTP shall receive $2 million;

(iii) 211 to 240 days sooner than the Typical Agency D/B Approach Execution Date, DTP shall receive $3 million;

(iv) 241 to 270 days sooner than the Typical Agency D/B Approach Execution Date, DTP shall receive $4 million;

(v) 271 to 300 days sooner than the Typical Agency D/B Approach Execution Date, DTP shall received $5 million;

(vi) 301 to 330 days sooner than the Typical Agency D/B Approach Execution Date, DTP shall receive $6 million; and

(vii) more than 330 days sooner than the Typical Agency D/B Approach Execution Date, DTP shall receive $7 million.

(d) Notwithstanding the maximum incentive amounts stated in Subsections (b) and (c) above, in no event shall the aggregate of incentive associated with delivery of the Fixed Price Proposal and the incentive associated with execution of the Design-Build Contract exceed $15 million.

(e) DTP shall be entitled to receive an incentive payment associated with cost savings identified and developed during the Development Work and Preliminary Engineering Work for a Phase in accordance with this **Subsection (e)**.

(i) In order to qualify as a "Realized Cost Savings", the proposed Deviation must generate savings, be approved by the Standards Board and, if a Deviation of Project Standards for Preliminary Engineering Work, by the WMATA Design Control Board, and be approved by the Department and incorporated into the Preliminary Engineering Plans and Specifications. If the proposed Deviation is approved and incorporated in accordance with the preceding sentence, then the Realized Cost Savings for that Deviation shall be the amount determined in accordance with **Section 4.3 (g)** of this Agreement.

(ii) The Realized Cost Savings from all approved and incorporated Deviations during the Development Work and Preliminary Engineering Work for a Phase shall be aggregated. If the aggregate Realized Cost Savings is less than 3% of the fixed price agreed to by the Parties for the Design-Build Contract, DTP shall not be entitled to any incentive payment for cost savings. If the aggregate Realized Cost Savings equals or exceed 3% of the fixed price agreed to by the Parties for the Design-Build Contract, DTP shall be entitled to receive 25% of the aggregate Realized Cost Savings above 3% of the agreed-to fixed price, as a cost savings incentive. The remainder of the aggregate Realized Cost Savings shall accrue to the benefit of the Project. The incentive payment for Realized Cost Savings is outside of and in addition to the Contract Price.

(f) Incentive payments for Phase 2 (including but not limited to any Realized Cost Savings originating from Phase 1 Development Work and Preliminary Engineering Work), if any, shall be agreed to by the parties at a future date and added to this Agreement or any other Project Agreements by Phase Supplement to **Exhibit H-2**.

(g) Upon issuance of the Notice to Proceed for Phase 1 Design-Build Work, DTP shall be entitled to submit an Invoice for Incentive Payments to which it is entitled to pursuant to **Section 6.5**. The timing of the Department's payment of the Incentive

Payments shall be governed by **Section 6.6**. If the Department fails to issue a Notice to Proceed for Phase 1 Design-Build Work, DTP shall not be entitled to be paid the Incentive Payments for Phase 1, except as expressly set forth in **Section 12.6(b)**.

(h) Upon issuance of the Notice to Proceed for Phase 2 Design-Build Work, DTP shall be entitled to submit an Invoice for the Incentive Payments for Phase 2 which Incentive Payments will be agreed to at a future date by the parties and added to **Exhibit H-2** by Phase Supplement. The timing of the Department's payment of the Incentive Payments shall be governed by **Section 6.6**. If the Department fails to issue a Notice to Proceed for Phase 2 Design-Build Work, DTP shall not be entitled to be paid the Incentive Payments for Phase 2, except as expressly set forth in **Section 12.6(c)**.

Section 6.6. Timing of Payments.

(a) By the 20th day of each month, DTP shall submit to the Department five (5) copies of an Invoice in the form attached hereto as **Exhibit O** for the Preliminary Engineering Work and Development Work performed during the prior month. Each Invoice shall be executed by an Authorized Representative of DTP. No Invoice (other than mobilization Invoices) shall be considered complete unless it includes the following:

(i) mutually agreeable supporting documentation;

(ii) a release, in form reasonably acceptable to the Department, signed by each subconsultant that provided services in any preceding Invoice for which DTP received payment certifying that it has received payment in full for such services, except only for amounts in dispute and waiving and releasing any lien rights; and

(iii) a monthly progress report.

DTP shall include in its Invoices all costs, including costs that are subject to deferral, for the Preliminary Engineering Work and Development Work broken out between Phase 1 and Phase 2 and between Preliminary Engineering Work and Development Work. DTP shall clearly identify the amount of the costs subject to deferral.

Within 15 Business Days after Department's receipt of the Invoice, Department will review the Invoice and all attachments thereto for conformity with all requirements of this Agreement or any other Project Agreements, and shall notify DTP of the amount approved for payment and reason for disapproval of any remaining amounts set forth in the Invoice. DTP may include such disapproved amounts in the next month's Invoice after correction of the deficiencies noted by the Department (all such disapproved amounts shall be deemed in dispute unless otherwise agreed).

Subject to the Department's right to offset payment under **Section 12.13(c)**, Department shall pay any approved Invoice or approved portion thereof within 30 days after Department's approval of the Invoice. The Department shall pay all approved costs in such Invoices other than the costs that are subject to deferral. The timing of the

Department’s payment for Preliminary Engineering Work and Development Work after receipt of an Invoice therefor not subject to deferral shall be governed by this section.

(b) If payment is not made by Department within thirty (30) days after Department’s receipt of the approved Invoice, DTP shall be entitled to interest on the amount due at the variable rate per annum equal to the reference rate (prime rate) announced by Bank of America, NT&SA from time to time, plus one percent (1%).

ARTICLE VII

DEVELOPMENT AND PRELIMINARY ENGINEERING SCHEDULE, CHANGE ORDERS AND OTHER OBLIGATIONS

Section 7.1. Performance of Work in Accordance with Master Project Schedule.

(a) Prior to the Agreement Date, DTP submitted to the Department its summary schedule for performance of the Preliminary Engineering Work and Development Work.

(b) Within 120 days after the Notice to Proceed for Phase 1 Development Work, DTP shall submit to the Department for its review, comment and approval DTP’s critical path schedule in Primavera for the performance of the Phase 1 and 2 Preliminary Engineering Work and Phase 1 Development Work (“Master Project Schedule”). Included in the Master Project Schedule will be: a Development Activities Schedule, a Preliminary Engineering Activities Schedule, a Design/Build Implementation Schedule (an initial Design/Build Implementation Schedule based upon the Supplemental DEIS will be included until the Preliminary Engineering Work for Phase 1 reaches the 50% completion level after which point a Design/Build Implementation Schedule will be included), and an Agency Schedule. Within 30 days after issuance of Notice to Proceed for Phase I Development Work, the Department will provide the Agency Schedule to DTP for inclusion in the Master Project Schedule. Prior to submitting the Master Project Schedule to the Department, DTP will submit the Preliminary Engineering Activities Schedule and the Design/Build Implementation Schedule to WMATA for its review and comment.

(c) DTP shall perform the Preliminary Engineering Work and Development Work in accordance with the Master Project Schedule, as may be modified from time-to-time. DTP's failure to meet a Milestone by a Milestone Date shall not be deemed to be an Event of Default so long as a Recovery Plan has been submitted by DTP and approved by the Department with respect to such Milestone. The parties shall use the Master Project Schedule for planning and monitoring the progress of the Preliminary Engineering Work and Development Work.

(d) DTP shall have the right to modify the Master Project Schedule as it deems necessary including revising the critical path and designated dates on the critical path, provided, however, that changes to the critical path and designated dates on the critical path must be approved by the Department and which approval shall not be unreasonably withheld. Notwithstanding the foregoing and unless it receives the Department’s prior consent, DTP shall not modify the Master Project Schedule in such a manner so that:

(i) the Department has less time to review, comment, approve or disapprove or take other required action that it otherwise is entitled to under the Agreement,

(ii) activities for which the Department is responsible that were not previously on the critical path are placed on the critical path unless such activities are placed on the critical path due to an Excusable Delay, or

(iii) It establishes Milestones that exceed the Milestone Dates set forth in **Section 4.2**.

(e) All modifications to the Master Project Schedule shall list and describe the activities modified.

(f) By the 20th day of every month, DTP shall submit to the Department a monthly update of the Master Project Schedule and a progress report, which shall be attached to the Invoice. The form of the update shall include a hard copy print out and electronic copy of the Master Project Schedule. All modifications to the Master Project Schedule shall list and describe the activities added or deleted, the logic and activity of changes and changes in activity designation limits. Modifications in the Master Project Schedule must be reasonably described in an accompanying narrative. The update shall include the completion status of active deliverables.

(g) In the event that the Master Project Schedule indicates that DTP will fail to achieve a Milestone by the applicable Milestone Date, DTP shall provide a written recovery plan to the Department for approval ("Recovery Plan").

Section 7.2. Change Orders.

(a) General. The Milestone Dates as set forth in the Master Project Schedule and Development Scope of Work set forth in **Exhibits F-1** and **H-1,** Preliminary Engineering Work set forth in **Exhibit G-1,** and Fixed Price for Preliminary Engineering Work and pricing for Tasked Development Work may only be adjusted by Change Orders or Directed Changes. Except for Directed Changes, Change Orders shall only be effective upon execution by both parties.

(b) Directive Letter. In the event that there is a dispute between DTP and the Department regarding the Development Work and/or Preliminary Engineering Work required by this Agreement , and the Department wishes to direct DTP to proceed in a specified manner irrespective of the dispute, the Department shall issue a Directive Letter to the Authorized DTP Representative. In the event that the Department refuses to issue a Change Order, DTP shall nevertheless perform all Preliminary Engineering Work and Development Work, and shall have the right to submit the issue to dispute resolution herein. The fact that a Directive Letter was issued by the Department in and of itself shall not be considered evidence that, in fact, a Directed Change occurred.

(c) Directed Change.

(i) The Department may issue a Directed Change when (a) it wants to change any portion of the Project Standards for Preliminary Engineering (other than approval of Deviations under the Deviation approval process set forth in this Agreement); (b) it wants to change any previously approved Preliminary Engineering Plans and Specifications or submittals under the Development Work; or (c) the Department and DTP are unable to agree on a Change Order changing the Development Work and/or Preliminary Engineering Work, as applicable. (ii) All Directed Changes shall provide a written detailed description of the changes and the proposed basis for compensation and adjustments to the Milestone Dates, if any. DTP shall proceed promptly with the Directed Changes. In the case of Directed Changes which involve changes to the Development Work and/or Preliminary Engineering Work, the parties shall thereafter negotiate in good faith a Change Order granting equitable changes. If the Parties are unable to reach agreement upon the Change Order, such dispute shall be resolved in accordance with **Article XIII**. Pending final determination, the Department shall pay DTP all amounts not in dispute and shall pay amounts in dispute with respect to items the parties agree constitute work outside the scope of Preliminary Engineering Work or Development Work on a time and materials basis in accordance with **Exhibit F-2**, subject to audit adjustments, and shall make adjustments to the Milestone Dates for any time periods not in dispute.

(d) Department-Initiated Change Orders.

(i) If the Department wants to evaluate whether to change the Development Work and/or Preliminary Engineering Work, other than due to a Directed Change, the Department shall deliver to DTP a written notice of the proposed change.

(ii) Within 30 Days after receipt of such notice, or longer or shorter period as the Department and DTP may mutually agree, DTP shall deliver to the Department: (aa) estimated adjustments to the Milestone Dates by reason of such change, if any, and (bb) a statement and breakdown of the estimated adjustment to the Fixed Price for Preliminary Engineering Work or pricing for Tasked Development Work by reason of such change.

(iii) Within 10 Business Days after receipt of DTP's evaluation, or longer period as the Department and DTP may mutually agree, the Department shall provide written notice to DTP of its intent to proceed or not to proceed with the proposed change. If the Department elects to proceed with the proposed change but does not accept the proposed adjustments, the Department shall negotiate a mutually acceptable Change Order with DTP or issue a Directive Letter in accordance with **Section 7.2(b)** .

(e) Process for DTP-Initiated Change Orders.

(i) DTP shall give the Department written notice (i) within 15 Business Days after DTP knew of an event, circumstance, act or inaction for which DTP is or will be entitled to a Change Order adjusting the Milestone Dates or (ii) within 15 Business Days after DTP knew of an event, circumstance, act or inaction for which DTP is or will be entitled to a Change Order adjusting the pricing. DTP's written notice shall provide the following information: (i) a description of the underlying event, circumstance, act or inaction; (ii) the contractual basis for entitlement to the Change Order; (iii) the estimated delay to Development Work and/or Preliminary Engineering Work on the critical path (if applicable); (iv) the estimated cost impact of the event, circumstance, act or inaction (if applicable); and (v) DTP's proposed plan for mitigating the impacts of such event, circumstance, act or inaction and the estimated costs of such mitigation.

(ii) DTP's failure to provide timely written notice shall constitute a waiver of all costs incurred prior to receipt of written notice.

(iii) The Department shall have 20 Business Days after receipt of DTP's notice to either confirm or refute in writing the basis for the Change Order. If the Parties dispute DTP's entitlement to a Change Order, such dispute shall be resolved in accordance with **Article XIII**.

(iv) After completion of the event, circumstance, act or inaction upon which the notice of a Change Order is based and within 20 Business Days after the actual delay to the Development Work and/or Preliminary Engineering Work or the date when the cost impact on the Development Work and/or Preliminary Engineering Work arising from such matter can be definitively quantified, DTP shall submit to the Department a written proposal for a Change Order setting forth the requested adjustment to the Milestone Dates and/or pricing, as applicable. The proposal for Change Order shall include: (i) a detailed description of the event, circumstance, act or inaction; (ii) a statement of the actual delay to the Development Work and/or Preliminary Engineering Work on the critical path (if applicable); and (iii) a detailed breakdown of the actual cost impact including, but not limited to, the costs of any mitigation (if applicable).

(v) The Department shall have 20 Business Days after receipt of DTP's proposal for a Change Order to accept the proposal for Change Order as submitted or to commence negotiation of the adjustment to the Milestone Dates and/or the Fixed Price for the Preliminary Engineering Work or Tasked Development Work pricing, as applicable. If the Parties are unable to resolve such adjustments, such dispute shall be resolved in accordance with **Article XIII**. Pending final determination, the Department shall pay DTP for all amounts not in dispute and shall permit adjustment to the Milestone Dates for all delay time not in dispute. Upon final determination, DTP shall be entitled to interest at the rate provided in **Section 6.6** on any amounts not paid due to the dispute which are determined to have been owing by the Department, calculated from the 30th day after DTP's earliest approved Invoice therefor.

(vi) DTP shall be entitled to a Change Order adjusting the Milestone Dates, as applicable, based on critical path analysis for delays to items of Development

Work and Preliminary Engineering Work on the critical path in the Master Project Schedule for any actual delay caused by Excusable Delays. Upon the occurrence of an Excusable Delay, DTP shall use reasonable efforts to mitigate the cost and schedule impacts of such Excusable Delay.

(f) Matters Eligible for Change Orders.

(i) Matters eligible for Change Orders during the Design-Build Work will be set forth in the Design-Build Contract.

(ii) DTP shall be entitled to a Change Order extending the Preliminary Engineering Work Milestone Dates and/or the Development Work Milestone Dates only for the following "Excusable Delays" provided that (i) they are beyond DTP's reasonable control and not due to a negligent act or omission of DTP or breach by DTP; (ii) they (or the effects thereof) materially and adversely delay DTP's performance of the Development Work and/or Preliminary Engineering Work; and (iii) they (or the effects thereof) could not have been avoided or prevented by due diligence and use of reasonable efforts by DTP:

(aa) Directed Changes or work requested or directed by the Department that is outside the Development Work and/or Preliminary Engineering Work;

(bb) Delays which are proximately attributable to Force Majeure events;

(cc) Department-Caused Delays;

(dd) Delays resulting from Differing Site Conditions;

(ee) Delays resulting from the presence of Hazardous Substances that are different in location, quantity or level of contamination than the information provided in the Hazardous and Contaminated Materials Technical Report prepared for the NEPA process (referenced in Section 3.5 of the Scope of Preliminary Engineering Work, **Exhibit G-1**), or release, threat of release, disposal, discharge, burial, repair, clean-up, removal or remediation of any Hazardous Substances on, in, under or near the Project Right-of-Way, unless such Hazardous Substances were brought to the Project Right-of-Way by DTP or to the extent the release or threat of release was due to the negligence, recklessness or willful misconduct or failure to provide proper engineering controls of DTP.

(ff) Delays due to suspension of Development Work and/or Preliminary Engineering Work by the Department pursuant to the Suspension provisions in **Section 12.22**;

(gg) Delays resulting from changes to the scope of the Preliminary Engineering Work or Development Work or any requirement to reperform previously completed Preliminary Engineering Plans and specifications or other deliverables due to mitigation requirements, changes to the configuration required by the FEIS or other changes required by the FEIS;

(hh) Delays resulting from the suspension, termination, interruption, denial or failure to obtain any Regulatory Approval required to perform the Preliminary Engineering Work or Development Work unless such event arises due to the fault of DTP;

(ii) Delays in the granting of a Regulatory Approval required to be obtained by DTP under **Exhibit F-1** beyond the date set forth in the Master Project Schedule therefor unless such event arises due to the fault of DTP;

(jj) Delays in obtaining required reviews or comments of any other governmental entity other than the Department or WMATA (including but not limited to VDOT, TRIP II, Fairfax County, Loudoun County, or MWAA) beyond the dates set forth in the Master Project Schedule therefor unless such event arises due to the fault of DTP;

(kk) Delays beyond the time identified in the Master Project Schedule for reviews, comments and approvals of Preliminary Engineering Plans and Specifications or other deliverables by TRIP II or governmental agencies or entities (other than the Department or WMATA), unless such event arises due to the fault of DTP;

(ll) Delays resulting from the discovery of unidentified utilities or misidentified location of utilities that could not have been reasonably anticipated after completion by DTP of utilities work in accordance with **Exhibit G-1**, Section 4.2.4, and the Utilities Report prepared in accordance with **Exhibit F-1**, Section 6.2, unless such event arises due to the fault of DTP;

(mm) Delays resulting from the discovery after the Agreement Date within the Project Right-of-Way of any species listed as threatened or endangered under the federal or state Endangered Species Act;

(nn) Delays resulting from the discovery after the Agreement date within the Project Right-of-Way of any archeological, paleontological or cultural resources;

(oo) Delays resulting from Change Orders issued in accordance with **Section 4.3(c)**.

(iii) DTP shall be entitled to Change Orders adjusting the Fixed Price for the Preliminary Engineering Work and pricing for the Tasked Development Work for any increased costs (including mitigation costs) associated with for the following, to the extent (i) that the following events, acts or inactions are beyond DTP's reasonable control and not due to a negligent act or omission of DTP or breach by DTP and (ii) they (or the effects thereof) could not have been avoided or prevented by due diligence and use of reasonable efforts by DTP:

(aa) Directed Changes or work requested or directed by the Department that is outside the Development Work and/or Preliminary Engineering Work;

(bb) Delays which are proximately attributable to Force Majeure events;

(cc) Department-Caused Delays;

(dd) Delays resulting from Differing Site Conditions;

(ee) Delays resulting from the presence of Hazardous Substances that are different in location, quantity or level of contamination than the information provided in the Hazardous and Contaminated Materials Technical Report prepared for the NEPA process referenced in Section 3.5 of the Scope of Preliminary Engineering Work, **Exhibit G-1**, or release, threat of release, disposal, discharge, burial, repair, clean-up, removal or remediation of any Hazardous Substances on, in, under or near the Project Right-of-Way, unless such Hazardous Substances were brought to the Project Right-of-Way by DTP or to the extent the release or threat of release was due to the negligence, recklessness or willful misconduct or failure to provide proper engineering controls of DTP.

(ff) Delays due to suspension of Development Work and/or Preliminary Engineering Work by the Department pursuant to the suspension provisions in **Section 12.22**; and

(gg) Changes to the scope of the Preliminary Engineering Work or Development Work or any requirement to reperform previously completed Preliminary Engineering Plans and Specifications or other deliverables due to mitigation requirements and changes to the configuration required by the FEIS or other changes required by the FEIS.

(hh) Delays in the granting of a Regulatory Approval required to be obtained by DTP under **Exhibit F-1** beyond the date set forth in the Master Project Schedule therefor unless such event arises due to the fault of DTP;

(ii eye eye) Delays resulting from the suspension, termination, interruption, denial or failure to obtain any Regulatory Approval required to perform the Preliminary Engineering Work or Development Work unless such event arises due to the fault of DTP;

(jj) Delays beyond the time identified in the Master Project Schedule for reviews, comments and approvals of Preliminary Engineering Plans and Specification or other deliverables by TRIP II or governmental agencies or entities (other than the Department or WMATA), unless such event arises due to the fault of DTP;

(kk) Delays in obtaining required reviews or comments of any other governmental entity other than the Department or WMATA (including but not limited to VDOT, TRIP II, Fairfax County, Loudoun County, or MWAA) beyond the dates set forth in the Master Project Schedule therefor unless such event arises due to the fault of DTP.

(ll) Delays resulting from the discovery of unidentified utilities or misidentified location of utilities that could not have been reasonably anticipated after completion by DTP of utilities work in accordance with **Exhibit G-1**, Section 4.2.4, and the Utilities Report prepared in accordance with **Exhibit F-1**, Section 6.2, unless such event arises due to the fault of DTP;

(mm) Delays resulting from the discovery after the Agreement Date within the Project Right-of-Way of any species listed as threatened or endangered under the federal or state Endangered Species Act;

(nn) Delays resulting from the discovery after the Agreement Date within the Project Right-of-Way of any archeological, paleontological or cultural resources;

(oo) Delays resulting from Change Orders issued in accordance with **Section 4.3(c)**.

(g) Matters Not Eligible for Change Orders

Matters which are DTP's exclusive responsibility include the following:

(i) Errors, omissions, inconsistencies or other design defects in the Preliminary Engineering Plans and Specifications that are not due to a deficiency in a required Department, VDOT or WMATA design standard as identified in the Basis of Design Report prepared by DTP in accordance with **Exhibit G-1**, Section 4.1.1, which either (A) are not known to DTP or (B) although known to DTP, are communicated in writing to the Department, VDOT or WMATA and which requirement is not waived or modified by the Department, VDOT or WMATA.

(ii) Any design changes requested in accordance with this Agreement by Department as part of the process of approving the Preliminary Engineering Plans and Specifications to the extent such design changes are required due to the failure of the Preliminary Engineering Plans and Specifications to comply with the requirements of the Contract Documents, including any design changes relating to Project safety (except to the extent that they arise from a change in Laws, Regulations, and Ordinances that constitutes a Force Majeure event);

(iii) Defective or incorrect schedules of Work or changes in the planned sequence of performance of the Work (unless changes in the planned sequence of performance of the Work arise from causes which otherwise give rise to a right to a Change Order);

(iv) The action or inaction of Subcontractors (unless arising from causes which otherwise give rise to a right to a Change Order);

(v) Correction of Preliminary Engineering Plans and Specifications and other deliverables that are not in compliance with the requirements of the Contract Documents and review and acceptance thereof by Department;

(vi) Obtaining all Regulatory Approvals (except Department Governmental Approvals) and compliance with the terms and conditions of all Regulatory Approvals except as set forth in **Subsections (f), (ii), (hh) and (eye eye) or (f), (iii), (hh) and (eye eye)**;

(vii) Failure by DTP to comply with this Agreement or any other Project Agreements;

(viii) Time extensions for delays not on a Critical Path of the Master Project Schedule;

(ix) Price increases for delays not on a Critical Path of the Master Project Schedule (unless arising from causes which otherwise give rise to a right to a Change Order);

(x) Delays in issuance of any permit or approval by any entity with jurisdiction over the subject matter of such permit or approval that is required to be obtained by DTP in order to perform the Preliminary Engineering Work or Development Work;

(xi) Costs covered by proceeds of insurance expressly required hereunder and insurance deductibles; and

(xii) Delays or failure in satisfying the conditions precedent to commencement of Preliminary Engineering Work and/or Development Work with respect to any Project Phase (other than Department-Caused Delays).

(xiii) DTP hereby assumes responsibility and accepts the allocated, sole risk for all matters described in this **Section 7.2(g)** and agrees that assumption and acceptance by DTP of responsibility and allocation for all such risks, costs, expenses and delays, and the consequences and costs and expenses resulting therefrom, is reasonable under the circumstances of this Agreement or any other Project Agreements.

Section 7.3. Project Execution Plan.

Within 120 days after Notice to Proceed for Preliminary Engineering Work, DTP shall submit to the Department a Project Execution Plan for the Preliminary Engineering Work and Development Work as more specifically set out in the Preliminary Engineering Work, **Exhibit G-1**. This plan will include policies and procedures to address project execution and management during Preliminary Engineering Work and Development Work.

Section 7.4. QA/QC Plan.

(a) Within 30 days after Notice to Proceed for Phase 1 Preliminary Engineering Work, DTP shall submit to the Department a proposed Quality Assurance/Quality Control (QA/QC) Plan for Preliminary Engineering Work and Development Work, as more specifically set out in the Scope of Work for Preliminary Engineering Services, **Exhibit G-1**, and the Scope of Work for Development Services, **Exhibit F-1**. The QA/QC Plan shall include, but not be limited to, the following:

(i) Qualifications of QA/QC personnel;

(ii) Organization, function and interfaces of QA/QC program;

(iii) Qualifications of key staff members responsible for design in each discipline;

(iv) Procedures providing adequate inter-discipline coordination and uniform system of independent checking;

(v) Procedures for documenting implementation of QA/QC program, deficiency reports, and follow-up corrective actions; and

(vi) QA/QC program review schedules.

Prior to or at the Notice to Proceed for Phase 1 Preliminary Engineering Work, DTP will provide an interim QA/QC Plan to the Department. No Preliminary Engineering Work may be performed prior to the Department’s approval of the interim QA/QC Plan.

(b) The Department and/or its designee may elect from time to time to audit DTP’s QA/QC Program. Audits may take place within the Project Office or the office of DTP's subconsultants.

Section 7.5. WMATA Contacts.

DTP will coordinate through WMATA's Preliminary Engineering Manager any contacts with staff, offices and departments of WMATA and its consultants.

Section 7.6. Meetings.

DTP will participate in weekly Project management meetings and monthly progress review meetings as more specifically set out in the Scope of Work for Preliminary Engineering Services, **Exhibit G-1** and the Scope of Work for Development Services, **Exhibit F-1**. DTP will be responsible for preparing agendas, meeting minutes and maintaining complete records of results, decisions, and actions of these meetings. DTP will record minutes for all meetings in which it participates.

Section 7.7. Extranet.

Within 120 days after Notice to Proceed for Development Work, DTP shall implement a project Extranet system that can be used for the performance of Preliminary Engineering Work and Development Work by DTP, the Department and WMATA and other parties or entities that the Department designates. The cost for this activity is included in the Core Development Work budget as set forth in **Exhibit F-2**.

Section 7.8. Utilities.

(a) The DTP is obligated to perform the utility activities as specifically set out in the Scope of Work for Preliminary Engineering Services, **Exhibit G-1** and the Scope of Work for Development Services, **Exhibit F-1**.

(b) The Department may elect to authorize DTP to perform specified utility relocations for a Project Phase prior to Notice to Proceed for Phase 1 Design-Build Work ("Utility Relocations). The obligation to perform the Utility Relocations will be added to this Agreement by Supplement which will include provisions relating to preparation and approval of a relocation plan, agreements with utility owners, applicable insurance, pricing and compensation terms mutually acceptable to the DTP and the Department. In the event that the Department makes such an election, the provisions of this **Section 7.8** and the Supplement shall govern such Utility Relocations.

(c) DTP shall comply with Title 56, Chapter 22, Section 56-570. Code of Virginia, in performing the Utility Relocations. DTP shall obtain and process for payment final billings for any utility protection, adjustment, or relocation within one calendar year after the utility work has been completed. DTP shall certify to Department that all eligible costs have been paid and there are no outstanding claims pending with a utility owner. DTP shall cause the performance of the Utility Relocations (including the design of both horizontal and vertical alignments) to be consistent with the final design, such that the construction of the final design shall not require any further removal or relocation of such utilities, or any further installation of permanent protection structures therefor.

(d) The location of utility facilities and potential impact of Utility Relocations of such facilities shall be evaluated in accordance with the Virginia Department of Transportation's Utility Accommodation Policy and the Land Use Permit Manual in preparing the Preliminary Engineering Work and in finalizing the design of the Project, with the following goals: (a) avoiding Utility Relocations to the extent practicable; (b) if a Utility Relocation is not reasonably avoidable, protecting the facility in place to the extent practical, and (c) otherwise minimizing the potential costs and delays relating to Utility Relocations to the extent practicable.

Section 7.9. Reporting.

(a) With each monthly Invoice, DTP shall provide to the Department a written monthly progress report for Development Work and Preliminary Engineering Work stating the progress of design, permitting, Right-of-Way acquisition Utility Relocations since the immediately preceding report, describing in reasonable detail all significant activities and as more specifically set out in the Scope of Work for Preliminary Engineering Services, **Exhibit G-1** and the Scope of Work for Development Services, **Exhibit F-1**. Such report shall include an updated Master Project Schedule and discussion of modifications and any new or continuing delays, material matters which may affect the future performance of DTP's obligations, and the causes thereof.

(b) DTP shall furnish or cause to be furnished to the Department such other documents, reports and information relating to the Project as Department may reasonably request from time-to-time.

(c) DTP's report obligations with respect to the Design-Build Work shall be governed by the Design-Build Contract.

ARTICLE VIII

DESIGN-BUILD WORK

Section 8.1. Pricing of Phase 1 Design-Build Work.

After completion of the Phase 1 Preliminary Engineering Work and the Department's approval of the 100% complete Phase 1 Preliminary Engineering Plans and Specifications, DTP shall submit, at no cost to the Department, except for any earned Incentives as referenced in **Section 6.5**, to the Department its proposed lump sum price plus allowances, if any ("Fixed Price Proposal") for completion of the Phase 1 Design-Build Work. In connection with submission of the Fixed Price Proposal, DTP shall also submit to the Department the information required by **Section 8.5**, except that the information in **Subsections (iv)** and **(v)** of **Section 8.5** shall only be provided upon request by the Department. The pricing information submitted by DTP shall be deemed confidential and shall be returned to DTP following completion of negotiations, subject to the requirements of **Section 8.5**.

Section 8.2. Negotiation of Fixed Price for Phase 1 Design-Build Work.

DTP and the Department shall jointly review DTP's Fixed Price Proposal for the Phase 1 Design-Build Work and shall negotiate in good faith and attempt to achieve all such final terms, which upon final approval by the Department shall be included in the Design-Build Contract for Phase 1. Within 30 days after final approval of the Contract Price, allowances, summary schedule and escalation formula, DTP shall submit for the Department's review a Schedule of Values, and Maximum Payment Curve for the Phase 1 Design-Build Work. DTP shall provide a CPM Schedule based upon and consistent with the proposed summary schedule and the requirements of the Design-Build Contract within 30 days after Notice to Proceed for the Phase 1 Design-Build Work.

Section 8.3. Pricing Negotiation of Fixed Price for Phase 2 Design-Build Work.

(a) During the Phase 2 Development Work and within 180 days after a written request for proposal from the Department or such longer period as the parties may mutually agree, DTP shall submit to the Department its Fixed Price Proposal for the Phase 2 Design-Build Work. The request for a Fixed Price Proposal will identify any design and/or cost changes for the Phase 2 Design-Build Work that may modify the Phase 2 Preliminary Engineering Plans and Specifications. DTP and the Department shall jointly review DTP's Fixed Price Proposal for the Phase 2 Design-Build Work and shall negotiate in good faith and attempt to achieve all such final terms and conditions, which upon final approval by the Department shall be included in the Design-Build Contract for Phase 2. Within 30 days after the Department's final approval of the Contract Price, allowances, summary schedule and escalation formula, DTP shall submit for the Department's review and comment a Schedule of Values, and Maximum Payment Curve for the Phase 2 Design-Build Work. DTP shall provide a CPM Schedule based upon and consistent with the proposed summary schedule and the requirements of the Design-Build Contract within 30 days after Notice to Proceed for the Phase 2 Design-Build Work.

Section 8.4. Conditions Precedent to Notices to Proceed for Design-Build Work. The Department shall not issue a Notice to Proceed for the Design-Build Work for any Project Phase unless and until the following conditions have been satisfied or waived in writing:

(a) Design-Build Guarantees substantially in the form of **Exhibit E-2** hereto with respect to the Design/Build Contract have been executed and delivered by Bechtel Guarantor and Washington Guarantor.

(b) The Department and DTP shall have agreed to the Scope of Work and other terms and conditions of the Design-Build Contract including, but not limited to, the Contract Price for Design-Build Work for such Project Phase, a summary schedule, Schedule of Values, Maximum Payment Curve, Guaranteed Testing Readiness Date, Guaranteed Substantial Completion Date, a Guaranteed Final Completion Date and escalation factors which shall have been incorporated in the Design-Build Contract.

(c) The Department shall have determined in its sole and absolute discretion that sufficient funding is available or reasonably expected to be made available in accordance with the approved Project Financial Plan for such Project Phase, subject to annual appropriations and allocations, to pay the cost of Design-Build Work for such Project Phase, the Deferred Costs, Schedule and Cost Savings Incentive Payments, Pre-CA Costs and all costs and expenses to be incurred by the Department.

(d) All Regulatory Approvals and Department Governmental Approvals, including any supplemental environmental approvals, required to commence Design-Build Work for such Project Phase shall have been received.

(e) DTP shall not then be in breach of any material requirement of this Agreement, the other Project Agreements and the Design-Build Contract;

(f) Letter of commitment for all required insurance policies and bonds required by the Design-Build Contract shall have been received and approved by the Department;

(g) There exists no court order which restrains, enjoins, challenges or delays performance of the Design-Build Work or the granting or renewal of any regulatory approval;

(h) All other conditions precedent set forth in the Design-Build Contract shall have been satisfied or waived in writing.

Section 8.5. Pricing Documents.

(a) Pricing Documents Definitions

"Pricing Documents" include documentary information demonstrating the basis of the Fixed Price Proposal or Contract Price for each Project Phase and Change Orders adjusting the Contract Price for each Project Phase adequate to enable an understanding and interpretation of how DTP arrived at the Fixed Price Proposal, Contract Price and Change Orders adjusting the Contract Price including:

(i) A proposed fixed price for the Design-Build Work that is fully loaded containing soft costs, hard costs, unit prices and quantities for the Design-Build Work. The proposed fixed price shall be based on and in accordance with the 100% complete Preliminary Engineering Plans and Specifications.

(ii) A proposed summary schedule for the performance of the Design-Build Work including proposed Guaranteed Testing Readiness Date, Guaranteed Substantial Completion Date and Guaranteed Final Completion Date.

(iii) A proposed escalation formula in the event that the Notice to Proceed for the Phase 1 Design-Build Work is delayed beyond a specified date.

(iv) Itemization of the estimated costs of performing the Design-Build Work separated into usual and customary items and sub-items (as applicable) to present a detailed estimate of costs. Costs will be comprised of direct labor, repair labor, equipment ownership and operation, expendable materials, permanent materials, subcontract costs, plant and equipment, indirect costs, contingencies, mark-up, overhead and profit; and

(v) All assumptions, scopes of work, detailed quantity takeoffs, rates of production and progress calculations and quotes from Subcontractors and Suppliers used to arrive at the Fixed Price Proposal or Contract Price.

(b) Exclusions from Pricing Documents

The Pricing Documents shall not include documents showing costs of work in similar projects or individual estimates supporting a reconciled pricing by DTP.

(c) Format of Pricing Documents

Representatives of the Department and DTP will meet at a mutually agreeable time to verify the completeness and legibility of the Pricing Documents, after which the Pricing Documents will be sealed jointly by the representatives of the Department and DTP.

In the event that following the initial organization, it becomes apparent that the Pricing Documents do not include the information required under **Section 8.5(a)** DTP shall submit to the escrow agent described in **Section 8.5(d)** supplemental information to make the documents complete within ten (10) days after written request by Department which supplemental information shall be date stamped and labeled to identify it as supplemental Pricing Documents information.

(d) Delivery of Pricing Documents into Escrow

(i) Contract Price. Within 30 days after issuance of the Notice to Proceed for Phase 1 Design-Build Work, DTP shall deliver to an escrow agent mutually agreeable to DTP and Department (as used in this Article the "Escrow Agent") the Pricing Documents related to the Contract Price.

(ii) Change Orders. For Change Orders that include an adjustment in excess of $10,000 to the Contract Price, within 30 days after execution of such Change Orders, DTP shall deliver to the Escrow Agent the Pricing Documents related to such Change Orders.

(iii) Certification. With each submission of Pricing Documents to the Escrow Agent. DTP shall submit a certification signed by an authorized officer, addressed to Department, certifying to the best of his or her knowledge that Pricing Documents were personally examined by the person signing the certificate, who determined that they comply with all applicable requirements of **Section 8.5**.

(e) Review of Pricing Documents.

(i) Joint Review. Upon ten (10) days written notice, the Pricing Documents shall be available during business hours for joint review by the Department and DTP in connection with resolution of disputes arising under this Agreement or any other Project Agreements and in connection with negotiations of Change Orders. If any party persistently fails to attend a noticed time for review, then the other party or parties shall be entitled to review the Pricing Documents., The Department shall execute and deliver to DTP a confidentiality agreement in a form to be mutually agreed upon consistent with **Section 14.2**.

(ii) No Impact on Discovery. The provisions contained in this **Section 8.5** shall in no way be deemed a limitation on discovery rights with respect to the information contained in the Pricing Documents.

(f) Proprietary Information

The Pricing Documents are, and shall always remain, DTP's property subject to the rights to review the Pricing Documents set forth in this **Section 8.5**. The Department acknowledges that DTP considers the Pricing Documents to constitute trade secrets or proprietary information. This acknowledgement is based upon the Department's understanding that the information that is or will be contained in the Pricing Documents is not known outside DTP's business, is known only to a limited extent and by a limited number of its employees, is safeguarded while in its possession, and may be valuable to its business strategies, assumptions and intended means, methods and techniques. The Department further acknowledges that DTP expended money in developing the information included in the Pricing Documents and further acknowledges that it would be difficult for a competitor to replicate the information contained herein. If the Pricing Documents become subject to a request for public disclosure, the provisions of **Section 14.2** shall apply hereto.

(g) Return of Pricing Documents

The Pricing Documents shall be maintained in escrow until 180 days have elapsed after the occurrence of all the following (i) termination of this Agreement and the Design-Build Contract, (ii) all disputes regarding this Agreement related to the Project and the Design-Build Contract have been resolved, and (iii) final payment of all amounts due DTP under the Design-Build Contract has been made and accepted. At such time, Department and all parties or persons who have received copies of all or a portion of the Pricing Documents through them shall return all copies of the Pricing Documents to the Escrow Agent for destruction, and Escrow Agent shall return the original Pricing Documents to DTP.

ARTICLE IX

CONTRACTING PRACTICES

Section 9.1. Limitation on DTP's Contracting Powers. Except for (a) this Agreement, (b) the other Project Agreements, and (c) the contracts, subcontracts and agreements expressly permitted under this Agreement or the other Project Agreements (such as but not limited to subcontracts DTP enters into to carry out the Preliminary Engineering Work or Design-Build Work) or authorized and directed by the Department, DTP shall have no right or authority to enter into, deliver or perform any contracts or agreements pertaining to the Project which are contrary to the terms of the Project Agreements without the express prior written consent of the Department. The Department may withhold or condition its consent in its sole and absolute discretion.

Section 9.2. Obligation to Refrain from Discrimination.

(a) DTP covenants and agrees that it shall not discriminate, and it shall require all of its subcontractors not to discriminate, against any person, or group of persons, on account of age, sex, race, creed, color, national origin, religion or the presence of any disability, in connection with the Project, nor shall DTP establish or permit any such practice or practices of discrimination or segregation with reference to the selection, use, hiring, firing, promotion or termination of employees, contractors, subcontractors and vendors; provided, however, that the prohibition against discrimination on the basis of disability shall not apply if the particular disability prevents the proper performance of the particular person involved.

(b) DTP shall conduct its activities in connection with the Project in compliance with all other requirements imposed pursuant to Title 2.2, Chapter 42, Sections 4200 et seq., Code of Virginia; Titles VI and VII of the Civil Rights Act of 1964, as amended; Section 504 of the Rehabilitation Act of 1973, as amended; Americans With Disabilities Act of 1990; and applicable rules and regulations including but not limited to provisions of Title 23, Code of Federal Regulations and Title 49, Code of Federal Regulations, Subtitle A, Office of the Secretary of Transportation, Part 1 (49 C.F.R. Part 21), which are applicable to the Project by reason of use of federal funds, and as said regulations may be amended**.**

Section 9.3. Disadvantaged Business Enterprises.

(a) The Department has adopted a Disadvantaged Business Enterprises ("DBE") program (which consists of both minority-owned firms and women-owned firms). DTP acknowledges that the Department has adopted an overall statewide DBE participation goal of 10% for design. Even though the Project has no specific DBE goal stipulated or required, DTP shall diligently seek to comply with the aforementioned overall DBE participation goal, use good faith efforts to allow DBEs the opportunity to participate as subconsultants in the Development Work and Preliminary Engineering Work and shall in all events comply with the commitments made in the Disadvantaged Business Enterprise Subcontracting Plan set forth in **Exhibit M.**

(b) DTP shall incorporate in all Subcontracts the requirement to diligently seek to comply with the commitments made in the Disadvantaged Business Enterprise Subcontracting Plan set forth in **Exhibit M**.

Section 9.4. Disadvantaged Business Enterprise Employment and Contracting.

DTP acknowledges and agrees that it is the policy of the Department to promote and ensure economic advancement of minorities and women through employment. DTP shall employ or select employees possessing the necessary skill, expertise, cost level and efficiency for the performance of the Development Work and Preliminary Engineering Work.

Section 9.5. Federal Requirements.

In performing the Development Work and Preliminary Engineering Work, DTP shall comply with the federal requirements set forth in **Exhibit D**.

ARTICLE X

INDEMNIFICATION, LIABILITY AND INSURANCE

Section 10.1. Indemnifications by DTP.

(a) Except as otherwise expressly provided in **Subsection (b)** below, DTP shall indemnify, protect, hold harmless and release each State Indemnitee from and against any and all losses, damages, costs, fines, penalties and expenses, including attorneys fees, such State Indemnitee incurs, arising out of Claims assessed or demanded by third parties, and DTP shall defend each State Indemnitee from and against any Claims, asserted by third parties, arising out of the following:

(i) Any error or negligent act or omission of any DTP Party, provided that the indemnity under this **Subsection (a)(i)** concerning Claims not related to Project Right of Way acquisition, Utility Relocations, procurement and documentation, shall be limited to such Claims arising out of death, bodily injury or property damage suffered by third parties;

(ii) Any violation by any DTP Party of Laws, Regulations and Ordinances in connection with or relating to the Project, the Preliminary Engineering Work or the Development Work;

(iii) Any mechanic's materialman's or design professional's lien on Department's right, title and interest in and to any Project Right of Way or other property arising out of the actual or alleged furnishing of labor, materials or services to or for the Project or any proportion thereof by or on behalf of or at the request of any DTP Party and due, which is not otherwise settled or bonded over after notice thereof, provided that such failure to pay was not due to a default by Department in making payment to DTP under this Agreement;

(iv) Any failure of any DTP Party to pay any sales, use or other taxes due or alleged to be due in connection with the Work or the purchase with the Work or the purchase, supply or use of any materials, services or equipment;

(v) Any Hazardous Substances originally introduced to or brought onto any Project Right of Way or other Department property by any DTP Party;

(vi) The presence, spreading, migration, release, remediation, storing, transportation or disposal of Pre-Existing Hazardous Substances not discovered during site acquisition work due to failure of any DTP Party to conduct investigations according to the procedures and provisions required by this Agreement;

(vii) The failure of any DTP Party to handle, store, transport, monitor, remediate or dispose of, in compliance with Laws, Regulations and Ordinances in effect at the time of the activity in question, Pre-Existing Hazardous Substances which are or become known or apparent to any DTP Party through site investigation or during the course of Preliminary Engineering Work or Development Work except to the extent the management of such Pre-Existing Hazardous Substances is the responsibility of a CMMR Contractor under **Section 5.9**;

(viii) Exacerbation, due to the negligence, recklessness or willful misconduct or failure to provide proper engineering controls of any DTP Party, of the release, spreading, migration or toxicity of Hazardous Substances which are or become known or apparent to or reasonably suspected by any DTP Party through site investigation or during the course of Preliminary Engineering Work or Development Work;

(ix) Infringement by any DTP Party (excluding third party equipment and software vendors) of any actually or allegedly patented, copyrighted, trademarked, service-marked or other proprietary materials, equipment, devices or processes; and

(x) Fraud or intentional misrepresentation by any DTP Party.

(b) DTP's indemnities exclude the portion of liability on a Claim that is attributable (i) to the culpability of a State Indemnitee or (ii) to a deficiency in a required Department, VDOT or WMATA design or construction standard which either (A) is not known to DTP or should not have been discovered by DTP in the exercise of reasonable prudence or (B) although known to DTP, is communicated in writing to Department and which requirement is not waived by Department. If the culpability of a State Indemnitee or such deficiency in a Department, VDOT or WMATA design or construction standard has contributed to a loss, DTP shall not be obligated to indemnify State Indemnitees for the proportionate share of such Claim caused thereby.

(c) For purposes of this **Section 10.1**, a "third party" means any person or entity other than a State Indemnitee, except that a third party includes (i) any State Indemnitee's employee, agent and contractor or his or her heir or representative who asserts a Claim arising out of a death, bodily injury or property damage against a State Indemnitee and which is not covered by State's worker's compensation program, and (ii) any State department or agency other than Department which in the exercise of its authority imposes upon Department Hazardous Substance remediation requirements or costs which are within the scope of an indemnity set forth in this **Section 10.1**.

Section 10.2. No Indemnity Regarding Pre-Existing Hazardous Substances.

Except to the extent provided in **Sections 10.1(a)(v),(vi), (vii) and (viii)**, the parties agree that neither shall have any obligation to indemnify the other or any third-party beneficiary or assignee with respect to any Claim relating to Pre-Existing Hazardous Substances.

Section 10.3. Defense and Indemnification Procedures.

(a) If Department receives notice of or otherwise has actual knowledge of a Claim which it believes is within the scope of DTP's indemnification under **Section 10.1**, it shall by writing as soon as practicable (i) inform DTP of such Claim; (ii) send to DTP a copy of all written materials Department has received asserting such Claim and (iii) notify DTP that either (A) the defense of such Claim is being tendered to DTP or (B) Department has elected to conduct its own defense for a reason set forth in **Subsection (e)** below.

(b) If the insurer under any applicable insurance policy accepts tender of defense, DTP and Department shall cooperate in the defense as required by the insurance policy. If no defense is provided by insurers under potentially applicable insurance policies, then **Subsections (c), (d), (e)** and **(f)** below shall apply.

(c) If the defense is tendered to DTP, it shall within forty-five (45) days of said tender deliver to Department a written notice stating that DTP (i) accepts the tender of defense and confirms that the Claim is subject to full indemnification hereunder without any "reservation of rights" to deny or disclaim full indemnification thereafter, (ii) accepts the tender of defense but with a "reservation of rights" in whole or part or (iii) rejects the tender of defense if it reasonably determines it is not required to indemnify against the Claim under **Section 10.1**. If such notice is not delivered within such forty-five (45) days, the tender of defense shall be deemed rejected.

(d) If the Department gives notice under **Section 10.3(a)** above, DTP shall have the right to select legal counsel for the State Indemnitees, subject to reasonable approval of the State Attorney General, and DTP shall otherwise control the defense of such Claim, including settlement, and bear the fees and costs of defending and settling such Claim. During such defense: (i) DTP shall at DTP's expense, fully and regularly inform Department of the progress of the defense and of any settlement discussions; and (ii) Department shall, at DTP's expense for all Department's third party expenses, fully cooperate in said defense, provide to DTP all materials and access to personnel it reasonably requests as helpful for defense, preparation and trial and which or who are under the control of or reasonably available to Department and maintain the confidentiality of all communications between it and DTP concerning such defense.

(e) Department or other State Indemnitees shall be entitled to select its own legal counsel and otherwise control the defense of such Claim if: (i) the defense is tendered to DTP and it refuses the tender of defense or fails to accept such tender within forty-five (45) days, or reserves any right to deny or disclaim such full indemnification thereafter; or (ii) Department, at the time it gives notice of the Claim or at any time thereafter, reasonably determines that (A) a conflict exists between it and the DTP which prevents or potentially prevents DTP from presenting a full and effective defense or (B) DTP is otherwise not providing an effective defense in connection with the Claim and DTP lacks the financial capacity to satisfy potential liability or to provide an effective defense. Department may assume its own defense pursuant to

Subsection (e)(ii) above by delivering to DTP written notice of such election and the reasons therefor. A refusal of, if failure to accept, a tender of defense may be treated by Department as a Claim against DTP subject to resolution pursuant to **Article XIII.**

(f) If Department or other State Indemnitees is entitled and elects to conduct its own defense pursuant hereto, all reasonable costs and expenses it incurs in investigating and defending any Claim for which it is entitled to indemnification hereunder shall be reimbursed by DTP on a current basis, unless the claim for indemnification is disputed by DTP, in which case such reimbursement, if any, shall be made when the dispute is resolved. In the event Department or other State Indemnitees is entitled to and elects to conduct its own defense, then it shall have the right to settle or compromise the Claim with DTP's prior written consent, which shall not be unreasonably withheld or delayed, or with approval of the court, and with the full benefit of DTP's indemnity.

Section 10.4. Claims Under Design-Build Contract.

Notwithstanding any provision of **Section 10.1** to the contrary, any Claim that is within the scope of an indemnification covered by the Design-Build Contract shall be governed by the provisions thereof, and DTP shall have no liability therefor under **Section 10.1**.

Section 10.5. Indemnification Period.

DTP's obligation to indemnify protect, defend and hold harmless the State Indemnitees with respect to the Development Work and Preliminary Engineering Work for a Project Phase shall terminate five years after the earlier of (i) completion of such Development Work and Preliminary Engineering Work or (ii) termination of this Agreement and the other Project Agreements. Notwithstanding the foregoing, in the event that DTP performs the Design-Build Contract, DTP's obligation to indemnify, protect, defend and hold harmless the State Indemnities with respect to the Development Work and Preliminary Engineering Work shall terminate five years after the earlier of (i) completion of the Design-Build Work or (ii) termination of the Design-Build Contract other than for DTP default.

Section 10.6. Liability.

(a) DTP warrants to the Department that the Preliminary Engineering Work shall be performed in accordance with and conform to all professional engineering principles, accepted as standards of care normally applicable to the provision of such services in the industry in the Commonwealth, and that the Development Work shall be performed in accordance with the standard of care normally applicable to the provision of similar development services and shall meet all of the requirements of this Agreement, including all exhibits and attachments hereto. DTP shall re-perform, at its sole cost, any portion of the Development Work and/or Preliminary Engineering Work which fails to comply with such standard of care, provided DTP receives written notice from the Department of such failure within two (2) years after completion thereof; provided, however, correction of the Preliminary Engineering Work following Notice to Proceed for Phase I Design-Build shall be governed by the Design-Build Contract.

(b) EXCEPT FOR THE EXPRESS WARRANTIES SET FORTH IN THIS AGREEMENT DTP MAKES NO OTHER WARRANTIES OR REPRESENTATIONS OF ANY KIND WHATSOEVER, EXPRESS OR IMPLIED, INCLUDING ANY WARRANTIES OF MERCHANTABILITY OR FITNESS FOR PURPOSE, RELATING TO THE DEVELOPMENT WORK AND/OR PRELIMINARY ENGINEERING WORK PERFORMED UNDER THIS AGREEMENT.

(c) Neither party (including their respective members, successors, assigns, subcontractors and subconsultants, and the affiliated entities thereof and employees of the foregoing) shall be liable to the other for indirect, incidental, special, punitive, exemplary or consequential damages of any nature including, but not limited to, lost profit or revenue and loss of use (including those attributable to WMATA, TRIP II and MWAA), whether based upon contract, tort, negligence, warranty, indemnity, strict liability, error or omission, delay or otherwise. The foregoing limitation shall not, however, in any manner:

(i) prejudice Department's right to recover liquidated damages from DTP as provided in the Design-Build Contract;

(ii) limit DTP's liability for damage to the extent covered by proceeds from insurance expressly required to be provided by DTP under this Agreement;

(iii) limit DTP's liability for any type of damage arising out of DTP's obligation to indemnify, defend and hold each State Indemnitee harmless from Claims under **Section 10.1** and elsewhere in the Agreement;

(iv) limit DTP's liability for fraud and willful misconduct; or

(v) limit DTP's right to a Change Order as provided in this Agreement or any other Project Agreements.

(d) DTP's (including its members, successors, assigns, subcontractors and subconsultants, and the affiliated entities thereof and employees of the foregoing) cumulative aggregate liability arising out of the Development Work and/or Preliminary Engineering Work or out of this Agreement to Department and WMATA, shall in no event exceed 50% of the contract value for Phase 1 Development Work and Phase 1 and Phase 2 Preliminary Engineering Work and 50% of the contract value for Phase 2 Development Work, regardless of whether based upon contract, tort, negligence, warranty, strict liability, error or omission, delay or otherwise. A cap for the Design-Build Contract will be contained in the Design-Build Contract. The foregoing limitation shall not, however, in any manner:

(i) limit DTP's aggregate liability for damage to the extent covered by insurance expressly required to be provided by DTP under this Agreement.

(ii) limit DTP's aggregate liability for any type of damage arising out of DTP's obligation to indemnify, defend and hold each State Indemnitee harmless from third party Claims under **Section 10.1(a)** and elsewhere in this Agreement.

(iii) limit DTP's liability for fraud and willful misconduct.

Section 10.7. Responsibilities Regarding Insurance.

(a) With respect to the Development Work and Preliminary Engineering Work, DTP shall carry or cause to be carried the insurance policies set forth in this **Section 10.7**. Within 10 days after Notice to Proceed for the Preliminary Engineering Work, DTP shall obtain and maintain the insurances set forth in this **Section 10.7**. Upon Notice to Proceed for Phase 1 Design-Build Work, DTP shall comply with the insurance requirements set forth therein. All insurance, retention and deductible requirements must be met, and so demonstrated to the Department prior to the commencement of any work under this Agreement.

(b) **Commercial General Liability Insurance.** DTP shall procure and maintain Commercial General Liability insurance in an amount no less than $5,000,000 per occurrence with an aggregate of $10,000,000 in a form at least as broad as that provided by the ISO commercial general liability policy form CG 00 01. This amount of coverage shall apply exclusively to this contract and this shall be reflected on the declarations sheet of the policy and by endorsement to include the contract name and number. This insurance shall include bodily injury and property damage, personal and advertising injury, XCU completed operations and products liability coverage. DTP agrees to verify to the Department that funds sufficient to meet any policy retention or deductible will be readily available to meet all claims.

Coverage should be worldwide.

Any excess policy obtained by DTP shall follow the form of the primary Commercial General Liability policy.

The Commonwealth of Virginia and the Virginia Department of Rail and Public Transportation and WMATA shall be named as additional insureds on the policy.

(c) **Automobile Liability Insurance.** DTP shall obtain automobile liability insurance including each of its members in the amount of $2,000,000 on all vehicles used in the service of this Agreement. The Department and the Commonwealth of Virginia and WMATA shall be named and so endorsed as additional insureds on the policy.

(d) **Professional Liability Insurance.** DTP shall procure and maintain professional liability insurance, which shall include each of its members, in the amount of $5,000,000 per occurrence with a $10,000,000 aggregate. This insurance shall be project specific, exclusive to this Project, and so reflected on the policy declarations sheet and by endorsement including this contract/project name and number. This policy shall include an extended reporting period of a minimum of five (5) years. The policy shall include a consent to settle provision specifying that claims may be settled by the insurer only with the consent of the insured. The insured shall also have the right to participate in the selection of counsel in the event of a claim. DTP agrees to verify to the Department that funds sufficient to meet any policy deductibles or self insured retentions are readily available to meet all claims.

(e) **Director's & Officer's Liability Insurance.** DTP shall ensure that each respective partner provide adequate Directors & Officers Liaiblity on behalf of each of their own respective members. Coverage should be worldwide.

(f) **Workers' Compensation Insurance**. At all times required by Laws, Regulations and Ordinances, DTP shall comply with Section 65.2-801 of the Code of Virginia and cause the members of DTP and their sub-contractors to procure and maintain in full force and effect insurance coverage for all their employees suffering bodily injury (including death) by accident or disease, which arises out of or in connection with the performance of the Development Work and Preliminary Engineering Work. Satisfaction of these requirements shall include:

(i) full participation in any required governmental occupational injury and/or disease insurance program, to the extent participation in such program is mandatory in any jurisdiction;

(ii) purchase of workers' compensation and occupational disease insurance providing benefits to employees in full compliance with all applicable Laws, Regulations and Ordinances, but only to the extent such coverage is not provided under a mandatory government program as in **Subsection (i)** above;

(iii) maintenance and demonstration prior to commencement of any work of a legally permitted and Commonwealth of Virginia approved program of self-insurance for workers' compensation and occupational disease;

(iv) Except to the extent prohibited by Laws, Regulations and Ordinances, the worker's compensation insurance shall provide for a full waiver of rights of subrogation against any State Indemnitee; and

(v) In addition to complying with the provisions for workers' compensation above, DTP shall at all times required by Laws, Regulations and Ordinances require its members to maintain coverage for employers' liability with a policy limit of $1 million per accident and in the aggregate per policy period.

(g) Each insurance policy specified above shall:

(i) Be issued by insurers authorized to do business in Virginia and having an A. M. Best rating of not less than A- or its equivalent Standard & Poor's, Moody's Investors Service or Duff & Phelps Credit Rating or as approved by the Department.

(ii) Shall be written on an occurrence basis with the exception of the professional liability and directors and officers liability insurance which may be written on a full claims made form with a five (5) year extended reporting option added.

(iii) Provide that no deductibles or self-insured retentions shall be applied against the Department.

(iv) Have the cancellation provision amended to add the requirement that "The insurance company shall give ninety (90) days written notice by registered or certified mail to the Department of a material policy change, intent not to renew or cancellation. In the event the insurance company does not give such notice, the policy period shall be extended for ninety (90) days from the date of notice, and all existing policy terms, conditions and rates, where not prohibited by law, shall remain in effect for that period."

(v) Contain no provisions or exclusions inconsistent with this Agreement.

(vi) DTP shall verify to the Department prior to the commencement of work that funds sufficient to pay deductibles and retentions are readily available to meet all claims. DTP further agrees to provide verification of the sufficiency of such funds upon the renewal of each policy. Verification shall be provided in a manner acceptable to the Department.

(h) DTP shall carry or cause to be carried the insurance policies and satisfy or cause to be satisfied the insurance covenants set forth in the Design-Build Contract.

Section 10.8. Exclusivity.

Where this Agreement provides an expressly stated remedy, regardless if expressed in this Article or elsewhere, such expressly stated remedy shall be exclusive of any inconsistent, additive or alternative extra-contractual remedies which might otherwise have been available at law or equity, provided, however, this Section is not intended to limit the Department's remedies under **Section 12.13**.

ARTICLE XI
REPRESENTATIONS, WARRANTIES AND FINDINGS

Section 11.1. Department Representations and Warranties. The Department hereby represents and warrants to DTP as follows:

(a) The Department is a department of the executive branch of the State and has full power, right and authority to execute, deliver and perform its obligations under, in accordance with and subject to the terms and conditions of this Agreement.

(b) Each person executing this Agreement on behalf of the Department has been or at such time will be duly authorized to execute each such document on behalf of the Department.

(c) Neither the execution and delivery by the Department of this Agreement, nor the consummation of the transactions contemplated hereby, is in conflict with or will result in a default under or violation of any other agreements or instruments to which it is a party or by which it is bound.

(d) There is no action, suit, proceeding, investigation or litigation pending and served on the Department which challenges the Department's authority to execute, deliver or perform, or the validity or enforceability of, this Agreement, or which challenges the authority of the Department official executing this Agreement other than as listed on **Exhibit Q**, and the Department has disclosed to DTP any pending and unserved or threatened action, suit, proceeding, investigation or litigation with respect to such matters of which the Department is aware.

Section 11.2. DTP Representations and Warranties. DTP hereby represents and warrants to the Department as follows:

(a) DTP is a duly organized and validly existing limited liability company created under the laws of the Commonwealth of Virginia, has the requisite power and all required licenses to carry on its present and proposed activities, and has full power, right and authority to execute and deliver this Agreement and to perform each and all of the obligations of DTP provided for herein.

(b) DTP has taken or caused to be taken all requisite action to authorize the execution and delivery of, and the performance of its obligations under, this Agreement.

(c) Each person executing this Agreement or any other Project Agreement on behalf of DTP has been or will at such time be duly authorized to execute each such document on behalf of DTP.

(d) Neither the execution and delivery by DTP of this Agreement and the other Project Agreements to which DTP is a party, nor the consummation of the transactions contemplated hereby or thereby, is in conflict with or will result in a default under or a violation of the governing instruments of DTP or any other agreements or instruments to which it is a party or by which it is bound.

(e) There is no action, suit, proceeding, investigation or litigation pending and served on DTP or its members which challenges DTP's authority to execute, deliver or perform, or the validity or enforceability of, this Agreement, or which challenges the authority of a DTP official executing this Agreement or the other Project Agreements; and DTP has disclosed to the Department any pending and unserved or threatened action, suit, proceeding, investigation or litigation with respect to such matters of which DTP is aware.

(f) There is no action, suit, proceeding, investigation or litigation pending and served on Bechtel Guarantor or Washington Guarantor which challenges Bechtel Guarantor’s or Washington Guarantor's authority to execute, deliver or perform, or the validity or enforceability of, the Comprehensive Agreement Guarantees and the Design Build Guarantees, or which challenges the authority of an officer of Bechtel Guarantor or Washington Guarantor to execute the Comprehensive Agreement Guarantees or the Design Build Guarantees; and DTP has disclosed to the Department any pending and unserved or threatened action, suit, proceeding, investigation or litigation with respect to such matters of which DTP is aware.

(g) As of the Agreement Date, DTP is in material compliance with all Laws, Regulations and Ordinances applicable to DTP or its activities in connection with this Agreement.

Section 11.3. Conflict Of Interest.

(a) “Organizational conflict of interest” means that because of other activities or relationships with other persons, a person or business entity is unable or potentially unable to render impartial assistance or advice to the Department, or the person's or business entity’s objectivity in performing the contract work is or might be otherwise impaired, or a person or business entity has an unfair competitive advantage.

(b) “Equity owner” of DTP excludes any person or entity who or which holds an equity interest in DTP solely through stock held in a mutual fund or blind trust.

(c) “Subcontractor” means and includes subcontractors, subconsultants and suppliers at any tier. In the context of DTP, “subcontractor” includes those which DTP knows, intends or reasonably anticipates will participate on behalf of DTP in the performance of DTP’s work on the Project, except where the cumulative amount of such subcontractor’s, subconsultant's or supplier’s compensation is reasonably anticipated to not exceed $100,000. In the context of WMATA or the Department, “subcontractor” includes those that have performed or will perform work on behalf of a contractor, consultant or supplier to WMATA or the Department in the performance of the contractor's, consultant’s or supplier's work for WMATA or the Department with respect to the Project, except where the cumulative amount of such subcontractor’s, subconsultant's or supplier’s compensation was or is reasonably anticipated to not exceed $25,000.

(d) No person or business entity actively engaged and undertaking current work, as a contractor or consultant to the Department or WMATA concerning the Project, including the Department’s or WMATA's environmental consultant and project management consultant, or any subcontractor of any of the foregoing with respect to such engagement, may participate as an equity owner of, member of or subcontractor or consultant to DTP.

(e) No person or business entity engaged to assist the Department with preparing contract documents for the Project may participate as an equity owner of, member of or subcontractor or consultant to DTP for the Project.

(f) No person or business entity previously performing work on the Project on behalf of WMATA or the Department may participate as an equity owner of, member of or subcontractor or consultant to DTP on the Project unless the Department is satisfied in its sole discretion that (1) such work did not provide the person or business entity with access to or knowledge of WMATA or Department confidential or inside information that could provide a competitive advantage respecting the procurement, or (2) the data and information provided to the person or business entity in the performance of its tasks is irrelevant to the procurement or (3) any person or business entity that served as a subcontractor for the environmental work for the Project, did not act as the preparer of the draft or final EIS and served only as a participant in the environmental process.

(g) No person or business entity engaged to assist the Department with preparing or applying evaluation criteria for the Project or with preparing, negotiating or approving contracts for the Project may participate as an equity owner of, member of or subcontractor or consultant to DTP on the Project.

(h) No person or business entity engaged to assist the Department with preparing, negotiating or approving contracts for the Project may have a financial interest in DTP or be an equity owner of, member of or subcontractor to DTP on the Project, other than a remote interest. A financial interest is remote only if (1) it is less than 2% of the legal or beneficial interest, or (2) it is a legal or beneficial interest that is held by a former employee, is less than 10% of the total legal or beneficial interest and is held exclusively in a qualified plan under §401 of the Internal Revenue Code, and the employment relationship ended more than six months before such assistance commences, (3) it is limited to joint venture or contracted work with DTP or an equity owner of, member of or subcontractor to DTP on discrete projects unrelated to the Department or the Project, and the Department is satisfied in its sole discretion that such situation is not an organizational conflict of interest or (4) the Department is otherwise satisfied in its sole discretion that it is sufficiently small or otherwise of such a nature that it is not and will not become an organizational conflict of interest.

(i) No person engaged to assist the Department with preparing, negotiating or approving contracts for the Project may have an immediate family member employed by any equity owner of DTP or subcontractor or consultant to DTP on the Project, unless the Department is otherwise satisfied in its sole discretion that the relationship is of such a nature that it is not and will not become an organizational conflict of interest. “Immediate family member” means grandparent, parent, sibling, spouse, child or grandchild, whether the family relationship exists by blood or adoption.

(j) The Department shall provide the names of the contractors, consultants, suppliers and subconsultants that have provided services to the Department or WMATA in connection with the Project, and will request that WMATA provide names of the contractors, consultants, suppliers and subconsultants that have provided services to WMATA in connection with the Project. DTP may request the Department to determine whether any such contractor, consultant, supplier, subconsultant or other entity is exempt from disqualification under **Subsection (f)**.

(k) Within 30 days of Notice to Proceed for Phase 1 Development Work, each of the Key Personnel shall disclose in writing to the Department any financial interest which he or she has in any commercial real estate parcel, improvement or leasehold interest that is subject to the locally preferred alternative acquisition list.

(l) To avoid any appearance of impropriety, DTP shall not negotiate the acquisition of Project Right-of-Way owned or otherwise controlled by West*Group Management LLC.

Section 11.4. Survival of Representations and Warranties. The representations and warranties of the Department and DTP contained herein shall survive expiration or earlier termination of this Agreement and the other Project Agreements.

Section 11.5. Department’s Findings Under PPTA. Department, as the Responsible Public Entity with respect to the Project, makes the following findings:

(a) the actions taken by Department pursuant to the PPTA facilitate the timely acquisition and construction of the Project;

(b) there is a public need for a transportation facility of the type of the Project;

(c) the Project is compatible with the State transportation plan and with local comprehensive plans;

(d) the estimated cost of the Project, as reflected in the Phase 1 Project Financial Plan and Phase 2 financial plan subject to **Section 5.4** hereof, is reasonable in relation to similar facilities;

(e) DTP's plans will result in the timely design, acquisition permitting and construction of the Project;

(f) the date of the Notice to Proceed for the Phase 1 Development Work shall be the date established for the beginning of construction of the Project as a Qualifying Transportation Facility;

(g) the Project will be owned by the Department with appropriate real estate interests conveyed to WMATA to operate and maintain the Project and will be kept open for use by members of the public from and after the opening date;

(h) the development, design, construction and warranting of the Project serve the public purpose of the PPTA; and

(i) the terms and conditions of this Agreement or any other Project Agreements serve the public purpose of the PPTA.

Section 11.6. Department's Other Findings. The Project, upon execution of this Agreement, is included in the National Capital Region's Constrained Long Range Plan and the State Transportation Improvement Program.

ARTICLE XII
TERMINATION AND SUSPENSION

Section 12.1. Termination Upon Expiration of Term. Unless earlier terminated in accordance with the terms of this **Article XII**, this Agreement or any other Project Agreements, and all the rights of DTP hereunder and thereunder shall cease and terminate, without notice or demand from the Department or DTP, on December 31, 2053.

Section 12.2. Termination for Public Convenience.

The Department may at any time when the Department determines in its sole discretion that such action is in the best interests of the State, on thirty (30) days' written notice terminate all of DTP's rights and obligations under this Agreement or any other Project Agreements.

Section 12.3. Termination by DTP.

DTP may, in its sole discretion, terminate the Agreement if any of the following occur: (i) the Project no longer includes rail or (ii) design-build of a Phase I is being performed by a party other than DTP or any Related Party, provided that Preliminary Engineering Work and Phase I Development Work have been completed to the satisfaction of the Department.

Section 12.4. Notice of Termination.

If either party exercises its right of termination under this **Article XII** terminating this Agreement or any other Project Agreements, the party shall deliver to the other party a written Notice of Termination specifying the effective date and the event giving rise to the termination.

Section 12.5. Rights and Obligations Upon Termination.

(a) If either party exercises its right of termination under this **Article XII** terminating this Agreement or any other Project Agreements, the Department may accept assignment of DTP's lease for the Project Office and may assume all obligations and liabilities arising thereunder after the effective date of the termination.

(b) If either party terminates the Design-Build Contract, Department and DTP shall comply with the provisions of the Design-Build Contract, and the parties' rights and obligations in the event of any such termination are as set forth in the Design-Build Contract.

Section 12.6. Compensation Upon Termination for Public Convenience.

(a) The parties shall agree as to the compensation to DTP for any Termination for Public Convenience by the Department. Such payment shall include, to the extent incurred, the cost of any Development Work and Preliminary Engineering Work performed prior to the effective date of termination that has not been previously paid, costs of termination of Subcontracts and leases, demobilization and otherwise winding down the Development Work and Preliminary Engineering Work and any Deferred Costs not previously repaid. Such compensation shall not exceed the total value of the Agreement not yet expended.

(b) With respect to a Termination for Public Convenience by the Department prior to Notice to Proceed for Phase 1 Design-Build Work, the parties shall agree as to the compensation to DTP, which shall include, in addition to amounts provided pursuant to **Section 12.6(a)**, DTP's Deferred Costs for Phase 1, only to the extent that DTP has deferred those costs and to the extent that those costs have not been previously repaid, as specified in **Section 6.1(d),** and Incentive Payments and Approved Pre-CA Costs if Department contracts for final design and construction work or solely construction work with another party other than DTP or any Related Party for Phase 1 Design-Build Work, in substantially the same form, within 365 days after the effective date of the Termination for Convenience, and the price for the design and construction of Phase 1 Design-Build Work is greater than 99% of the Fixed Price Proposal for the Phase 1 Design-Build Work, less the amount of Incentive Payments with respect to Phase 1 and Approved Pre-CA Costs that would be avoided by entering into the alternative contracts for final design and construction.

(c) With respect to a Termination for Public Convenience by the Department after Notice to Proceed for Phase 1 Design-Build Work and prior to Notice to Proceed for Phase 2 Design-Build Work, the parties shall agree as to the compensation to DTP, which shall include, in addition to amounts provided pursuant to **Section 12.6(a)**, DTP's Deferred Costs for Phase 2, only to the extent that DTP has deferred those costs and to the extent that those costs have not been previously repaid, as specified in **Section 6.1(d),** and Incentive Payments if the Department contracts for final design and construction work or solely construction work with another party other than DTP or any Related Party for Phase 2 Design-Build Work, in substantially the same form, within 365 days after the effective date of the Termination of Convenience and the price for the design and construction of Phase 2 Design-Build Work is greater than 99% of the Fixed Price Proposal for the Phase 2 Design-Build Work, less the amount of Incentive Payments with respect to Phase 2 that would be avoided by entering into the alternative contracts for final design and construction.

(d) The failure of the parties to agree on amounts due under this **Section 12.6** shall be a dispute to be resolved in accordance with **Article XIII**.

Section 12.7. Termination Upon Fulfillment of Obligations.

At any time after final completion of all Phases of the Project so long as DTP has no remaining obligations to the Department with respect to the Project under the Design-Build Contract, either DTP or the Department may, at its option, upon 45 days prior written notice, terminate this Agreement or any other Project Agreements.

Section 12.8. Termination for Failure to Issue Notices to Proceed.

In the event that a Notice to Proceed with respect to any Phase is not issued within 180 days after the applicable date set forth in the Design-Build Contract (as such date may be extended by mutual agreement of the parties), either the Department or DTP may, at its option, terminate this Agreement in writing with respect to the affected Phase and to terminate the Design-Build Contract in accordance with the Design Build Contract.

Section 12.9. DTP Actions Upon Termination.

On the effective date of termination of this Agreement or DTP's rights under this Agreement, DTP shall deliver or shall have delivered to the Department all Work Product of DTP.

Section 12.10. Liability After Termination.

(a) In the event this Agreement or any other Project Agreement is terminated by reason of a material default, such termination shall not excuse the defaulting party from any liability arising out of such a default as provided in the Project Agreements.

(b) DTP's and the Department's representations and warranties, **Article X**, the dispute resolution provisions contained in **Article XIII**, and all other provisions which by their inherent character should survive termination of this Agreement shall survive the termination of this Agreement.

Section 12.11. DTP Defaults. Each of the following events shall constitute a "DTP Event of Default" under this Agreement or any other Project Agreements:

(a) DTP shall fail in any material respect to timely observe or perform or cause to be observed or performed any covenant, agreement, obligation, term or condition required to be observed or performed by the DTP under this Agreement or any other Project Agreements; (provided that if the same is also required of the DTP under the Design-Build Contract, then **Subsection (f)** below shall apply in lieu of this **Subsection (a)**).

(b) any representation or warranty made by DTP in this Agreement or any other Project Agreements shall be inaccurate or misleading in any material respect on the date made or deemed made, and a material adverse effect upon the Project or Department's rights or obligations under the Project Agreements results therefrom;

(c) DTP shall fail to execute and deliver any Project Agreement as and when required under this Agreement or any other Project Agreements or fail to cause Bechtel Guarantor or Washington Guarantor to execute and deliver the Comprehensive Agreement Guarantees or the Design-Build Guarantees as and when required under this Agreement or the Design-Build Contract;

(d) DTP shall commence a voluntary case seeking liquidation, reorganization or other relief with respect to itself or its debts under any bankruptcy, insolvency or other similar law now or hereafter in effect; shall seek the appointment of a trustee, receiver, liquidator, custodian or other similar official of DTP or any substantial part of DTP's assets; shall file an answer admitting the material allegations of a petition filed against DTP in any involuntary case commenced against DTP; shall consent to any such relief or to the appointment of or taking possession by any such official in any voluntary case commenced against DTP; shall make an assignment for the benefit of creditors; shall fail, be unable, or admit in writing the inability generally to pay DTP's debts as they become due; or shall take any action to authorize any of the foregoing, or any of the foregoing acts or events shall occur with respect to both Bechtel Guarantor and Washington Guarantor (but not necessarily in the same proceeding or concurrently);

(e) an involuntary case shall be commenced against DTP seeking liquidation, reorganization, dissolution, winding up, a composition or arrangement with creditors, a readjustment of debts or other relief with respect to DTP or DTP's debts under any bankruptcy, insolvency or other similar law now or hereafter in effect; seeking the appointment of a trustee, receiver, liquidator, custodian or other similar official of DTP or any substantial part of DTP's assets; seeking the issuance of a writ of attachment, execution, or similar process; or seeking like relief, and such involuntary case shall not be contested by DTP in good faith or shall remain undismissed and unstayed for a period of 90 days, or any such involuntary case or cases shall be commenced against both Bechtel Guarantor and Washington Guarantor (but not necessarily in the same proceeding or concurrently) and such case or cases shall not be contested by such guarantor in good faith or shall remain undismissed and unstayed for a period of 90 days; or

(f) any uncured Event of Default by DTP under the Design-Build Contract.

Section 12.12. DTP Cure Periods. If DTP shall fail to cure an Event of Default within the periods set forth herein, it shall thereafter constitute a "DTP Default." DTP shall have the following cure periods with respect to the following DTP Event of Defaults:

(a) respecting a DTP Event of Default under **Section 12.11(a), (b) or (c)**, a period of 30 days after DTP receives from the Department written notice of the DTP Event of Default, provided that if the DTP Event of Default is under **Section 12.5(a) or**

(b) and is of such a nature that the cure cannot with diligence be completed within such time period and DTP has commenced meaningful steps to cure promptly after receiving the default notice, then DTP shall have such additional period of time, up to a maximum cure period of 180 days, as is reasonably necessary to diligently effect cure;

(b) respecting a DTP Event of Default under **Section 12.11(d) or (e)**, no cure period; and

(c) respecting a DTP Event of Default under **Section 12.11(f)**, the cure period, if any, set forth in the Design-Build Contract.

Section 12.13. Department Remedies for DTP Default. Upon the occurrence of a DTP Default and expiration, without full cure, of any applicable cure period, the Department may exercise any one or more of the following remedies as the Department in its sole and absolute discretion shall determine:

(a) in the event of a DTP Default under **Section 12.11(a), (b), (c), (d), (e) or (f)**, any and all remedies available at law or in equity, including but not limited to, recovery of damages to the extent provided by law. However, any such remedies shall be subject to any and all exclusions and limitations contained in this Agreement;.

(b) in the event of an DTP Default under **Section 12.11(f)**, any applicable remedies set forth in the Design-Build Contract subject to any and all exclusions and limitations on liability contained therein; and

(c) the Department may offset any sums the Department owes to DTP by any sums owing to the Department from DTP, including but not limited to liquidated damages or other undisputed or finally adjudicated monetary damages owing the Department under the Design-Build Contract.

Section 12.14. Department Defaults.

(a) Each of the following events shall constitute a "Department Event of Default" under this Agreement:

(i) the Department shall fail to observe or perform in any material respect any covenant, agreement, term or condition required to be observed or performed by the Department under this Agreement or any other Project Agreements, including the Department's failure to pay to DTP any material undisputed amount then due and owing;

(ii) any representation or warranty made by the Department herein or in any other Project Agreement shall be inaccurate or misleading in any material respect on the date made and a material adverse effect upon the Project or DTP’s rights or obligations under the Project Agreements results therefrom;

(iii) an uncured event of default by the Department occurs under any other Project Agreement; or

(iv) the General Assembly shall enact legislation which (A) the state intends to impact, and does impact, only DTP, this Agreement, the Project or the class of agreements or transportation facilities established pursuant to the PPTA encompassing the Project; and (B) materially impairs DTP's rights under this Agreement to design, plan, develop and construct the Project all as provided for in this Agreement and the other Project Agreements.

(b) Except as set forth in **Subsection (a)(iv)** above, DTP acknowledges that no act or omission of any federal, State, regional or local government or agency thereof, other than the Department, shall constitute a Department Event of Default hereunder.

Section 12.15. Department Cure Periods. If the Department shall fail to cure a Department Event of Default within the periods set forth herein, it shall hereafter constitute a "Department Default." The Department shall have the following cure periods with respect to the following Department Event of Defaults:

(a) respecting a Department Default under **Section 12.14(a)(i) or (ii)**, a period of 30 days after the Department receives written notice of the Department Default, provided that if the Department Default is of such a nature that the cure cannot with diligence be completed within such time period and the Department has commenced meaningful steps to cure immediately after receiving the default notice, the Department shall have such additional period of time as is reasonably necessary to diligently effect cure;

(b) respecting a Department Default under **Section 12.14(a)(iii)**, the cure period, if any, set forth in the relevant Project Agreement; and

(c) respecting a Department Default under **Section 12.14(a)(iv)**, a period of 30 days after the Department receives written notice of the Department Default.

Section 12.16. DTP Remedies.

(a) Except as otherwise provided herein, upon the occurrence of a Department Default, DTP may receive any monetary damages or other compensation or award including, but not limited to, the Approved Pre-CA Costs, Deferred Costs not previously reimbursed and Incentive Payments set forth in **Section 6.5** to which it would have otherwise been entitled but for the acts of or failure to act by the Department, and exercise any rights and remedies available to DTP under this Agreement or as are otherwise available to DTP at law; provided, however:

(i) DTP shall have no right to seek or obtain equitable relief against the Department arising out of a Department Default except (A) writ of mandamus to the extent available, (B) equitable remedies regarding monetary compensation and (C) equitable remedies available in the case of a Department Default resulting from action by the Department which is outside the Department's legal authority;

(ii) Department's obligations and liabilities are strictly limited to those set forth in the Project Agreements, and DTP shall not have and may not assert, and waives, any Claim against Department based on any supposed or alleged duties arising in tort; and

(iii) notwithstanding anything herein to the contrary, the recovery of Claims against the State shall be subject to all Laws, Regulations, Ordinances and case law, including without limitation, Title 8.01, Chapter 3, Article 18 (commencing at Section 8.01-192) and Article 18.1 (commencing at Section 8.01-195.1), Code of Virginia.

(b) The Department's payment of any monetary damages or other compensation or award under **Subsection (a)** other than Deferred Costs, Approved Pre-CA Costs and Incentive Payments set forth in **Section 6.5** above shall be conditioned upon express legislative authorization and appropriation of the payment to DTP of such damages, compensation or award.

(c) Promptly after any final judgment is rendered by a court of competent jurisdiction or arbitrator awarding compensation or damages to DTP and all appeal rights are exhausted, the Department shall institute payment procedures as set forth in Title 8.01, Section 8.01-195, Code of Virginia.

(d) If DTP has not received the full amount of any outstanding monetary damages or other compensation or award owing to DTP under **Subsection (a)** above within 24 months after the same became payable, the Department shall (i) use diligent efforts to obtain from the Virginia General Assembly an appropriation sufficient to make such payment, and (ii) include such payment amount in its annual budget request, for five legislative sessions, if necessary, and diligently seek an appropriation to make such payment.

Section 12.17. Not Used.

Section 12.18. DTP Obligations Upon Termination. Upon the effective date stated in a Notice of Termination, for whatever reason, and except as directed by Department, DTP shall immediately proceed as follows, regardless of any delay in determining or adjusting any amounts due:

(a) Stop Work as specified in the notice;

(b) Enter into no further Subcontracts and place no further orders for materials, services or facilities, except as necessary to complete the continued portion of the Work, if any, or for mitigation of damages;

(c) Terminate all Subcontracts except to the extent that continuation of the Subcontract is necessary in order to mitigate damages;

(d) Assign to the Department or its designee in the manner, at the times, and to the extent directed by the Department, all of the right, title, and interest of DTP under the Subcontracts so terminated, in which case the Department will have the right, in its sole discretion, to accept performance, settle or pay any or all claims under or arising out of the termination of such Subcontracts;

(e) Settle outstanding liabilities and claims arising out of such termination of Subcontracts, with the approval or ratification of the Department, to the extent it may require, which approval or ratification shall be final;

(f) Transfer and deliver to the Department or its designee, as directed by Department, (a) possession and control of the Project, and (b) all right, title and interest of DTP in and to the Work Product from the Development Work and Preliminary Engineering Work in process or completed, supplies and other materials produced or acquired for the Development Work and Preliminary Engineering Work terminated; and

(g) Take all action that may be necessary, or that the Department may direct, for the protection and preservation of the Development Work and Preliminary Engineering Work that is in the possession of DTP and in which the Department has or may acquire an interest.

Section 12.19. Inclusion in Subcontracts. DTP shall insert in all Subcontracts that the Subcontractor shall stop Development Work and/or Preliminary Engineering Work on the date of and to the extent specified in a Notice of Termination and shall require that Subcontractors insert the same provision in each Subcontract at all tiers. DTP shall communicate, immediately upon receipt thereof, any Notice of Termination issued by the Department to all affected Subcontractors.

Section 12.20. Liability After Termination.

In the event this Agreement or any other Project Agreement is terminated by reason of a DTP Default or a Department Default, such termination shall not excuse the defaulting party from any liability arising out of such default as provided in and limited by this Agreement or any other Project Agreements.

Section 12.21. Not Used.

Section 12.22. Suspension.

The Department can suspend the Development Work and/or Preliminary Engineering Work for any reason, subject to a Change Order equitably adjusting the Milestone Dates and compensation, if applicable, being granted to DTP; provided, however, that the Department has the absolute right to suspend the Development Work and/or Preliminary Engineering Work for periods of time not to exceed 48 hours, up to 2 times within a 12-month period, which will not be considered a Department Caused Delay and will not be eligible for a Change Order. DTP can suspend the Development Work and Preliminary Engineering Work for uncured failure to pay undisputed amounts, in which case DTP shall be entitled to a Change Order equitably adjusting the Milestone Dates and compensation, if applicable.

This **Article XII** sets forth the entire and exclusive provisions and rights of the Department and DTP regarding termination of this Agreement or any other Project Agreements, and any and all other rights to terminate at law or in equity are hereby waived to the maximum extent permitted by law.

ARTICLE XIII

DISPUTES

Section 13.1. Partnering. The Department and DTP shall participate in a continuing partnering effort with the appropriate participation from WMATA in accordance with its agreement with the Department referenced in **Section 3.5**, from the Agreement Date through the performance of the Development Work and Preliminary Engineering Work. The objectives of the partnering process are effective and efficient performance, intended to achieve timely and efficient Project implementation and completion and to create mutual trust and respect for each party's respective roles in the development, construction and operation/maintenance process while recognizing the respective risks inherent in those roles.

Section 13.2. Dispute Resolution in Design-Build Contract; No Declaratory Judgment Procedure. All disputes between the Department and DTP arising under or relating to the Design-Build Contract (or arising out of or relating to obligations under this Agreement or any other Project Agreements which are duplicative of obligations under the Design-Build Contract) shall be resolved in accordance with the dispute resolution provisions set forth in the Design-Build Contract.

Section 13.3. Negotiation by Authorized Representatives. Any dispute which may arise between the Department and DTP, other than disputes described in **Section 13.2**, shall be mutually resolved through best efforts and good faith negotiations between the Authorized Department Representatives and Authorized DTP Representatives. In conducting such negotiations, the Department and DTP recognize that in drafting this Agreement or any other Project Agreements, it is impracticable to make provisions for every contingency that may arise during its term. Accordingly, in order to achieve the resolution of any dispute concerning matters for which the Agreement provides no clear guidance, the Department and DTP concur in the principle that this Agreement or any other Project Agreements is intended to operate between them in fairness.

(a) For Preliminary Engineering Work activities, there will be three separate levels for dispute resolution:

Level 1 Project Disputes: The Department's Project Director and WMATA's Director of Extensions will meet to review and resolve all contract disputes with DTP's Project Executive Director. Failure to resolve disputes at this level will force the dispute to Level 2.

Level 2 Project Disputes: All disputes that are not resolved or disposed of by agreement issued by the Department's Project Director, will be elevated to the Department's Director and the CEO/General Manager of WMATA, and DTP's

Chairperson or their authorized representatives. Failure to resolve disputes at this level will force the dispute to Level 3.

Level 3 Project Disputes: All disputes that are not resolved or disposed of by agreement issued by the Department's Director will be decided by the Dispute Review Board established in accordance with **Section 13.4**.

(b) For Project Development Work activities, there will be three separate levels for dispute resolution:

Level 1 Project Disputes: The Department's Project Director will meet with DTP's Project Executive Director to review and resolve all contract disputes. Failure to resolve disputes at this level will force the dispute to Level 2.

Level 2 Project Disputes: All disputes that are not resolved or disposed of by agreement issued by the Department's Project Director, will be elevated to the Department's Director and DTP's Chairperson, or their authorized representatives. Failure to resolve disputes at this level will force the dispute to Level 3.

Level 3 Project Disputes: All disputes that are not resolved or disposed of by agreement issued by the Department's Director will be decided by Dispute Review Board that is established in accordance with **Section 13.4**.

Section 13.4. Dispute Review Board.

(a) Any matter arising under this Agreement or any other Project Agreements may be brought to the Dispute Review Board ("Board") established in accordance with this **Section 13.4** for nonbinding resolution. The Board shall assist in the resolution of Disputes arising out of the Phase 1 Development Work and Phase 1 and 2 Preliminary Engineering Work. The parties may agree to institute a dispute review board with respect to Phase 2 Development Work which agreement shall be evidenced by a supplement to this Agreement or any other Project Agreements. The Board shall assist in and facilitate the timely and equitable resolution of Disputes between the Department and DTP in an effort to avoid delay, the formal claims process and litigation. The Board shall fairly and impartially consider Disputes referred to it, and shall provide non-binding, written recommendations to the Department and DTP to assist in the resolution of these Disputes. It is intended that the Department and DTP resolve potential Disputes as quickly as possible at the working level to maintain cooperative working relationships, minimize costs, avoid delays, claims and litigation.

(b) The Board members shall be neutral, show no partiality to either DTP or the Department, or have any conflict of interest. To that end, no member shall have the following:

(1) An ownership interest in any entity involved in the performance of this Agreement or any other Project Agreements or a financial interest in this Agreement

or any other Project Agreements except for payment rendered for services on the Dispute Review Board;

(2) Previous employment by (other than as a dispute review board member), contract or financial ties to the Department, DTP, any Related Party or any Subcontractor within a period of two (2) years prior to the Agreement Date;

(3) A close professional, personal or familial relationship with the Department, DTP, any Related Party or any Subcontractor which, in the judgment of either party, could suggest favoritism or partiality;

(4) Prior involvement in the Project of a nature which could compromise that member's ability to participate impartially in the Board's activities; and

(5) A discussion or an agreement with the Department, DTP, any Related Party or Subcontractor regarding employment or any other type of contractual relationship to occur after this Agreement or any other Project Agreements is completed;

(c) Within thirty (30) days after the Agreement Date the established Dispute Review Board will have three members: one selected jointly by the Department and WMATA, one selected by DTP and one that the Department/WMATA and DTP's selected board members will jointly select. Assurances will be made that Dispute Review Board members are highly qualified in their field and are independent of the Department, WMATA and DTP.

As a part of the nomination and approval process, the first two prospective Board members shall submit complete disclosure statements to the Department and DTP and WMATA. Each disclosure statement shall include a resume of experience, together with a declaration of all past, present, and anticipated or planned future relationships to the Project and with all parties and entities involved in the Project. Disclosure of any recent, close, professional, personal and familial relationships with all key members of all parties to the design or construction contract shall be included. Immediately after approval, the Department/WMATA and DTP selected board members shall jointly select the third member. The third member shall be selected within 14 days after the first two members are selected. The first two members shall ensure that the third member meets the criteria listed herein. The third Board member shall supply a disclosure statement to the first two Board members and to the Department and DTP and WMATA. The third member shall serve as the chairperson of the Board. Board members shall have sufficient experience with design-build projects or the development of public sector projects, the interpretation of contract documents, plans, specifications, and contract negotiations. At least one member of the Board shall have previous alternative dispute resolution experience.

(d) The Dispute Review Board shall execute the Dispute Review Board Agreement set forth in **Exhibit L** within 14 days after approval of the third Board member. Around this same time, the Board shall meet to formulate its rules of operation, the selection of its chairperson and the general frequency and location of its meetings.

(e) Services of a Board member may be terminated at any time provided written notice is given no less than 30 days prior to the effective date of termination. Conditions for termination shall comply with one of the following:

(1) The Department and WMATA, by joint decision, may terminate the services of their appointee.

(2) DTP may terminate the services of its appointee.

(3) The third member's services may only be terminated by the consent of the Department and DTP and WMATA, as appropriate.

(4) The personal resignation of the Board member.

If it becomes necessary to replace a member of the Board, the replacement member shall be nominated and approved in the same manner as the original member. Once the need for a replacement member is determined, the nomination and approval procedures shall begin immediately and shall be completed within 30 days, or as mutually agreed upon by the parties, from the notice of termination. The new member will execute a copy of the Dispute Review Board Agreement.

(f) The Board shall formulate its own rules of operation consistent with the purposes of this Section and Dispute Review Board Agreement. The procedure for operations shall be flexible to allow for changing situations. The Board shall furnish a copy of its rules of operation to the Department and DTP. In order to keep abreast of the progress of the Development Work and Preliminary Engineering Work, the Board members shall receive a copy of the monthly progress report prepared by DTP.

(g) Unless otherwise agreed to by DTP and the Department, Dispute Review Board Meetings shall be held at the Project Office. These meetings shall be held at regular intervals (generally every 90 days throughout performance of the Development Work and Preliminary Engineering Work). The frequency of such Board Meetings shall be as agreed upon by the Department, DTP and WMATA, as appropriate, and the Board, depending on the progress of the Development Work and Preliminary Engineering Work. The frequency of such meetings may be adjusted for reasons of project complexity, participant's scheduling, critical operations, or the like at the parties' discretion.

Board Meetings shall consist of an informal round table discussion attended by representatives of the Department and WMATA, as appropriate, and DTP directly involved in the Development Work and Preliminary Engineering Work. Attorneys may attend such meetings and advise their clients but may not participate unless the parties agree otherwise in writing. An agenda, mutually prepared by DTP and the Department, is suggested to keep matters in focus and on track. DTP and the Department are encouraged to submit items early to meet the time frames for inclusion on the agenda. Copies of the proposed agenda shall be distributed to the Board chairperson and the other parties in sufficient time to be received by each party no later than 7 days before the scheduled meeting date. The Board shall prepare minutes of Board meetings and circulate them for comments, revisions, and approval of both parties. Seeking any Board member's advice or consultation during meetings or at any other time is counterproductive to the impartial nature of the Board and expressly prohibited.

(h) Either the Department or DTP or WMATA, as appropriate, may refer a matter believed to be a Dispute to the Board at any time. The request for a hearing shall be submitted in writing to the chairperson of the Dispute Review Board. This request for a hearing shall state clearly and in full detail the specific issue(s) of the Dispute to be considered by the Board and a recommendation as to whether it may be heard at the next Board Meeting or if a hearing needs to be arranged. A copy of the request for a hearing shall be simultaneously furnished to the other party. After conferring with each party, the Board chairperson shall establish a submittal schedule and date for the hearing so that adequate time is allowed for the other party to respond to the requesting party's statement and for the Board members to review both statements and any supporting documentation prior to the Hearing.

(i) Statements and documentation shall conform to the following requirements:

(i) Each party shall prepare concise written position statements, with page number references for any supporting documentation;

(ii) A single, complete, mutually agreed upon compilation of supporting documentation with pages consecutively numbered. The parties shall cooperate in composing this documentation and submitting copies for each Board member in sufficient time for review prior to the hearing;

(iii) The party requesting the hearing shall submit its position paper first, followed by the other party, with copies provided to each Board member and the other party;

(j) Normally, hearings will be conducted at the Project Office. During the Hearing, the party requesting the hearing shall present its position first, followed by the other party. Attorneys may attend the hearing and advise their clients but may not participate unless the parties agree otherwise in writing. Each party will be permitted successive rebuttals until all aspects are fully covered. The Board members and the parties may ask questions, request clarification, or ask for additional data. Both the Department and DTP shall be given reasonable time to present the information and documentation regarding the issue(s) before the Board. A formal transcript will not be prepared. Each Board member will take notes during the hearing. During the hearing, no Board member shall express any opinion concerning the merits of any aspect of the Dispute.

(k) After the hearing is concluded, the Board will confer to formulate its recommendations. All deliberations of the Board will be conducted in private and with individual views kept strictly confidential. The Board's deliberations and recommendations, together with any explanations for its reasoning, shall not be disclosed to either party except by final written recommendation. The Board shall make every effort to reach a unanimous recommendation. If this is not possible, the dissenting member may prepare a minority report. The Board's recommendation for resolution of the Dispute will be provided in writing to the Department and DTP within 7 days of the completion of the hearing.

(l) Within 30 days of receiving the Board's recommendation, each party shall respond to the other party in writing stating its position on the Board's recommendation. If the Board's recommendation is accepted, the Department will move to promptly process the resolution as mutually agreed upon. Either party's failure to timely respond to the Board's recommendation shall constitute a rejection of the recommendation.

(m) In the event the Board's recommendation is rejected, at the request of either party, the Board may meet with both parties to provide additional clarification of its recommendations. This meeting shall not be used to appeal the Board's recommendation or to introduce additional information or documentation unless such information or documentation is newly revealed and directly pertinent to the issue(s) in question. If new information has become available, either party may request that information be considered before the Board makes its final recommendation. The recommendation of the Board is not binding upon either party. The recommendation shall not be admissible in any subsequent administrative or judicial proceeding or discovery related thereto between the parties and any other entity, regardless of tier, involved in the prosecution of the Development Work or Preliminary Engineering Work.

(n) The parties agree not to subpoena or otherwise seek discovery from Board members, including their notes, transcripts of Board Meetings or hearings, any other documents originated by the Board or presented by either party, and not otherwise part of the normal contract documentation, for any subsequent administrative or judicial proceeding between the parties or any other entity, regardless of tier, involved in the prosecution of the Development Work or Preliminary Engineering Work.

(o) DTP and the Department shall share 50% of the costs of the Dispute Review Board. The Department will share with DTP its expense to copy, and mail minutes, monthly progress reports and provides administrative services such as secretarial services.

(p) In the event the parties mentioned above do not resolve the default or dispute using the procedure outlined above, any party may commence a civil action for resolution of the dispute in accordance with **Section 16.11**.

(q) Each party shall bear its own attorney’s fees and costs in any Dispute or litigation arising out of or pertaining to this Agreement or any other Project Agreement, and no party shall seek or accept an award of attorney’s fees or costs.

Section 13.5. Litigation.

As permitted by Section 56-568 of the PPTA, the parties agree that any requirement that the State Corporation Commission issue a declaratory judgment regarding a material default (as defined in Section 56-565 of the PPTA) pursuant to such Section 56-568, as a prerequisite to exercising any remedy set forth in this Agreement or any other Project Agreements or such Section 56-568, shall not apply to this Agreement or any other Project Agreement.

ARTICLE XIV

RECORDS, REPORTS AND WORK PRODUCT

Section 14.1. Maintenance of Records.

(a) DTP shall maintain a complete set of all books and records prepared or employed by DTP in its management, scheduling, cost accounting and otherwise with respect to all Development Work and Preliminary Engineering Work under this Agreement and any other Project Agreements. DTP shall grant to the Department such audit rights and allow the Department such access to and the right to copy such books and records (subject to **Section 14.2**) as the Department may request in connection with Development Work and Preliminary Engineering Work, the cost of the Development Work and Preliminary Engineering Work paid by the Department, issuance of Change Orders, the resolution of disputes and such other matters as Department reasonably deems necessary for purposes of verifying compliance with this Agreement or any other Project Agreements and applicable Laws, Regulations and Ordinances.

(b) Nothing contained in this Agreement or any other Project Agreements shall in any way limit the constitutional and statutory powers, duties and rights of elected state officials, including the independent rights of the State Auditor of Public Accounts, in carrying out his or her legal authority.

(c) DTP shall require each Subcontractor to comply with the requirements applicable to DTP set forth in this **Section 14.1**.

(d) DTP shall maintain all records and documents relating to all Development Work and Preliminary Engineering Work under this Agreement and any other Project Agreements (including copies of all original documents delivered to Department) for five years after the later of completion thereof or termination of this Agreement and the Design-Build Contract, as applicable, and shall notify the Department where such records and documents are kept. Records to be retained include all books and other evidence bearing on DTP's costs and expenses under this Agreement or any other Project Agreements.

Section 14.2. Public Records.

(a) Any Work Product the Department owns pursuant to this Agreement or the Design-Build Contract or otherwise, and any document of which the Department obtains a copy, may be considered public records under the Virginia Public Records Act, Section 42.1-76 through 42.1-91, Code of Virginia or official records under the Virginia Freedom of Information Act, Section 2.2-3700 through 2.2-3714 of the Code of Virginia, and as such may be subject to public disclosure. The Department recognizes that certain Work Product the Department owns pursuant to this Agreement or the Design-Build Contract and certain documents of which the Department obtains a copy may contain information exempt from disclosure under Section 2.2-3705, Code of Virginia, may constitute trade secrets as defined in Section 59.1-336, Code of Virginia, and may include confidential information which is otherwise subject to protection from misappropriation or disclosure. Should such records become the subject of a request for public disclosure, the Department shall respond as follows:

(i) The Department shall use reasonable efforts to immediately notify DTP of such request and the date by which it anticipates responding.

(ii) DTP must then assert in writing to the Department any claim that such records contain proprietary information that is exempt from disclosure under Section 2.2-3705, Code of Virginia, or is subject to protection pursuant to Section 59.1-339, Code of Virginia, or other State law so that the Department may consider such assertion in responding to the requester.

(iii) If DTP fails to make such assertion within three Business Days after the date the Department notifies DTP of its intended response, the Department shall have the right to make such disclosure.

(iv) If DTP makes a timely assertion that the requested records contain proprietary information, trade secrets or confidential information, and thus are exempt from disclosure or otherwise protected under state law, upon consultation with DTP to agree upon a reasonable effort and legal cost, at DTP's expense, the Department and DTP shall seek judicial declaration of the rights of the parties. Until such declaration is made, the Department will maintain the confidentiality of such records.

(v) In no event shall the Department be liable to DTP as a result of any disclosure of such records by the Department pursuant to this **Section 14.2.**

(vi) If the Department's denial of a request for disclosure of records is challenged in court and the Department agrees to a request by DTP to defend its position, DTP shall assist the Department in its defense and shall indemnify the Department and any State Indemnitee for any and all damages assessed and costs (including the fees and costs of the Department's attorneys) the Department incurs in such defense, including any attorneys' fees lawfully assessed against the Department or any State Indemnitee.

(b) If DTP believes that any Work Product or any document subject to transmittal to or review by the Department under the terms of this Agreement or any other Project Agreements or any other Project Agreement contains proprietary or confidential information or trade secrets that are exempt or protected from disclosure pursuant to State law, DTP shall use its best efforts to identify such information prior to such transmittal or review and it and the Department shall confer on appropriate means of ensuring compliance with applicable laws prior to transmittal or review. Upon the written request of either party, DTP and the Department shall mutually develop a protocol for the transmittal, review and disclosure of Work Product or other documents produced or obtained by DTP so as to avoid violations of any applicable Laws, Regulations or Ordinances.

Section 14.3. Reporting Requirements and Inspection and Audit Rights.

(a) DTP shall deliver to, or make available for review by, the Department, as determined by the Department:

(i) as soon as available and in any event within 120 days after the end of each fiscal year of DTP, or its members, and prior to execution of the Design-Build Contract, the audited financial statements for such year of DTP, its members and its subsidiaries, if any, prepared on a consolidated basis. With respect to financial statements of DTP's members which are not otherwise publicly available such financial statements shall be made available for review to the Department or its designee, but no copies shall be retained by the Department or its designees if any such financial statements retained by such designees would be subject to public disclosure under the Virginia Public Records Act ; and

(ii) promptly after the sending or filing thereof, copies of any periodic reports on Forms 10-K, 10-Q and 8-K (or any successor forms adopted by the Securities Exchange Commission) which DTP files with the Securities Exchange Commission.

(b) Nothing contained in this Agreement or any other Project Agreement shall in any way limit the constitutional and statutory powers, duties and rights of elected state officials, including the independent rights of the State Auditor of Public Accounts, in carrying out his or her legal authority.

(c) The Department shall have such other audit rights as set forth in the Design Build Contract.

(d) The Department shall have the following audit inspection rights: DTP shall maintain, and the Department shall have the right to examine books, records, documents and other evidence and accounting procedures and practices, sufficient to reflect properly all direct costs of whatever nature claimed to have been incurred for the performance of this Agreement or any other Project Agreements. Such right of examination shall include inspection at all reasonable times of DTP's office, or such parts thereof, as may be engaged in the performance of this Agreement.

Section 14.4. Not Used.

Section 14.5. Not Used.

Section 14.6. Garnishments of Payments.

Payments under this Agreement or any other Project Agreements shall be subject to any garnishment and attachment orders issued pursuant to the laws of the Commonwealth of Virginia and to levies issued under the laws of the United States.

Section 14.7. Press Releases.

DTP shall not issue any press release on other public communication regarding this Agreement or any other Project Agreements or the Design-Build Contract prior to the issuance of the Notice to Proceed for Phase 1 Design-Build Work without the Department's prior written consent, except as may be required by state or federal securities laws, such consent not to be unreasonably withheld. Department will notify DTP of any press releases on this Project.

Section 14.8. Work Product.

(a) Except as set forth in this **Section 14.8** and provided the Department has made payment to DTP in accordance with this Agreement or any other Project Agreements, all Work Product shall become the property of the Department, and DTP shall deliver possession of the Work Product to the Department when required under this Agreement or any other Project Agreements.

(b) "DTP Background Data" means all intellectual property rights in all designs, plans, models, drawings, prints, samples, transparencies, specifications, reports, manuscripts, working notes, documentation, manuals, photographs, negatives, tapes, discs, databases, software which DTP (or its members or subconsultants) owns or has prepared prior to the Agreement Date. DTP Background Data used by DTP in connection with this Agreement or any other Project Agreements shall remain the property of DTP or its members or subconsultants as applicable, but DTP grants a non-exclusive, irrevocable, royalty-free license to the Department, WMATA and the FTA to use, copy or modify DTP Background Data solely with respect to this Project.

(c) With respect to any intellectual property rights in software vested in any third party that are supplied to the Department by DTP as part of the Development Work or Preliminary Engineering Work, but not prepared or developed, under or in connection with this Agreement or any other Project Agreements, DTP shall use all reasonable efforts to obtain from such third party such permission, waiver or license as may be necessary to enable the software to be used, copied or modified by the Department, WMATA and the FTA solely in connection with this Project.

ARTICLE XV

RESERVED RIGHTS

Section 15.1. Exclusions from DTP’s Interests.

DTP's rights and interests in the Project and Right-of-Way shall be specifically limited only to such rights and interests which are created in favor of DTP in the Project Agreements and reasonably necessary and required for Project Purposes. All other rights with respect to the Project, including, without limitation, all ownership, development, maintenance, repair, replacement, operation, use and enjoyment of, and access to, the Project are reserved to the Department.

ARTICLE XVI

MISCELLANEOUS

Section 16.1. Assignment.

(a) DTP may not, without the prior written consent of the Department, voluntarily or involuntarily assign, convey, transfer, pledge, mortgage or otherwise encumber its rights or interests under this Agreement or any other Project Agreements or the other Project Agreements.

(b) Any transfer of the right or practical ability to control the policies and decisions of DTP (except transfers occurring after the final completion of the Preliminary Engineering Work and Development Work and the Design-Build Contract), whether due to transfer of partnerships or membership interests, beneficial interests or otherwise, shall constitute an assignment prohibited under 16.1 (a) above without the Department's prior written consent.

(c) The Department may transfer and assign its interests in the Project, this Agreement and any other Project Agreements to any other public agency or public entity that is a department of the Commonwealth, as permitted by law, provided that the successor or assignee has assumed all of the Department's obligations, duties and liabilities under this Agreement and the Project Agreements then in effect, and has provided DTP with reasonable assurance of its legal and financial authority to honor and perform the same.

(d) If either party changes its name, such party agrees to promptly furnish the other party with written notice of change of name and appropriate supporting documentation.

Section 16.2. Subcontractor Approvals.

The Department shall have the right to approve or disapprove in whole or in part DTP's subcontracting plan. DTP shall submit to the Department lists of potential subcontractors that it may use for the Development Work and Preliminary Engineering Work. The Department shall have the right to disapprove any potential subcontractors on that list. Within ten days after receipt of such a list, the Department shall notify DTP in writing of any potential subcontractors that it has disapproved. DTP shall not enter into contracts with disapproved subcontractors.

The Department approves the subcontracting by DTP to joint ventures of Bechtel Infrastructure Corporation and Washington Group International, Inc. (an Ohio corporation) to perform the Preliminary Engineering Work and the Design-Build Work.

Section 16.3. No Gift or Dedication.

Nothing contained in this Agreement or any other Project Agreements shall be deemed to be a gift or dedication of any portion of the Project, Project Right-of-Way or Work Product to the Department or the general public or for any public use or purpose whatsoever, or be deemed to create any rights in the Project, Project Right-of-Way or Work Product except as expressly set forth herein.

Section 16.4. Notices.

(a) Whenever under the provisions of this Agreement or any other Project Agreements it shall be necessary or desirable for one party to serve any notice, request, demand, report or other communication on another party, the same shall be in writing and shall not be effective for any purpose unless and until actually received by the addressee or unless served:

(i) personally,

(ii) by independent, reputable, overnight commercial courier,

(iii) by facsimile transmission:

(A) where the transmitting party includes a cover sheet identifying the name, location and identity of the transmitting party, the phone number of the transmitting device, the date and time of transmission and the number of pages transmitted (including the cover page),

(B) where the transmitting device or receiving device records verification of receipt and the date and time of transmission receipt and the phone number of the other device, and

(C) where the facsimile transmission is immediately followed by service of the original of the subject item in the manner provided in **Subsections (a)(i), (ii)** or **(iv)** hereof, or

(iv) by deposit in the United States mail, postage and fees fully prepaid, certified mail, with return receipt requested, addressed as follows:

If to DTP:

Project Executive Director, Dulles Transit Partners, LLC
[project office address to come]

With a copy to:

President, Infrastructure Group
Washington Group International, Inc.
720 Park Boulevard
Boise, ID 83729

And

President
Bechtel Infrastructure Corporation
50 Beale Street
San Francisco, CA 94119

If to the Department:

Department of Rail and Public Transportation
1313 East Main Street, Suite 300
Richmond, VA 23218
Attn: Director
Fax: (804) 225-3664

With a copy to:

Richard L. Walton, Jr., Esq.
Senior Assistant Attorney General
900 E. Main Street
Richmond, Virginia 23219
Fax: (804) 786-9136

(b) Any party may, from time to time, by notice in writing served upon the other party as aforesaid, designate an additional and/or a different mailing address in Virginia or an additional and/or a different person to whom all such notices, requests, demands, reports and communications are thereafter to be addressed. Any notice, request, demand, report or other communication served personally shall be deemed delivered upon receipt, if served by mail or independent courier shall be deemed delivered on the date of receipt as shown by the addressee's registry or certification receipt or on the date receipt at the appropriate address is refused, as shown on the records or manifest of the U.S. Postal Service or independent courier, and if served by facsimile transmission shall be deemed delivered on the date of receipt as shown on the received facsimile (provided the original is thereafter delivered as aforesaid).

Section 16.5. Binding Effect.

Subject to the limitations of **Section 16.1**, this Agreement or any other Project Agreements shall be binding upon and shall inure to the benefit of the parties hereto and their respective legal representatives, successors and permitted assigns, and wherever a reference in this Agreement or any other Project Agreements is made to any of the parties hereto, such reference also shall be deemed to include, wherever applicable, a reference to the legal representatives, successors and permitted assigns of such party, as if in every case so expressed.

Section 16.6. Relationship of Parties.

(a) The relationship of DTP to the Department shall be one of an independent contractor, not an agent, partner, joint venturer or employee, and the Department shall have no rights to direct or control the activities of DTP or any Related Party, except to the extent set forth in this Agreement or any other Project Agreements.

(b) Officials, employees and agents of the Department shall in no event be considered employees, agents, partners or representatives of DTP.

Section 16.7. Third Party Beneficiary.

WMATA shall be deemed to be a Third Party Beneficiary of this Agreement. The Department will include in the Department's Interlocal Agreement with WMATA an agreement by WMATA to be bound by the exclusions and limitations of DTP's liability with respect to DTP set forth in this Agreement for Preliminary Engineering Work and Development Work. Nothing contained in this Agreement or any other Project Agreement is intended or shall be construed as creating or conferring any rights, benefits or remedies upon, or creating any obligations of the parties hereto toward, any person or entity not a party to this Agreement or any other Project Agreements, except as otherwise specifically stated in this Agreement or any other Project Agreements.

Section 16.8. Waiver.

(a) No waiver by any party of any right or remedy under this Agreement or any other Project Agreements shall be deemed to be a waiver of any other or subsequent right or remedy under this Agreement or any other Project Agreements. The consent by one party to any act by the other party requiring such consent shall not be deemed to render unnecessary the obtaining of consent to any subsequent act for which consent is required, regardless of whether similar to the act for which consent is given.

(b) No act, delay or omission done, suffered or permitted by one party or its agents shall be deemed to waive, exhaust or impair any right, remedy or power of such party under this Agreement or any other Project Agreement, or to relieve the other party from the full performance of its obligations under this Agreement and the other Project Agreements, except as specifically waived.

(c) No waiver of any term, covenant or condition of this Agreement or any other Project Agreements shall be valid unless in writing and signed by the obligee party.

(d) The acceptance of any payment or reimbursement by a party shall not: (i) waive any preceding or then-existing breach or default by the other party of any term, covenant or condition of this Agreement or any other Project Agreements, other than the other party's prior failure to pay the particular amount or part thereof so accepted, regardless of the paid party's knowledge of such preceding or then-existing breach or default at the time of acceptance of such payment or reimbursement; or (ii) continue, extend or affect (A) the service of any notice, any suit, arbitration or other legal proceeding or final judgment, (B) any time within which the other party is required to perform any obligation or (C) any other notice or demand.

(e) No custom or practice between the parties in the administration of the terms of this Agreement or any other Project Agreements shall be construed to waive or lessen the right of a party to insist upon performance by the other party in strict compliance with the terms of this Agreement or any other Project Agreements.

Section 16.9. No Brokers.

Each party represents and warrants that it has not dealt with any real estate or business opportunity broker or agent or any finder in connection with this Agreement or any other Project Agreements. To the extent permitted by law, each party agrees to indemnify, protect, defend with counsel reasonably acceptable to the other party and hold harmless the other party against any claim for commission, finder's fee or like compensation asserted by any real estate or business opportunity broker, agent, finder or other person claiming to have dealt with the indemnifying party in connection with this Agreement or any other Project Agreements.

Section 16.10. Not Used

Section 16.11. Governing Law and Venue.

This Agreement shall be governed and construed in accordance with the laws of the Commonwealth of Virginia applicable to contracts executed and to be performed within the State. Venue for any legal action arising out of this Agreement or any other Project Agreements or its breach shall be filed, heard and decided in the Circuit Court for the City of Richmond, Virginia, which shall have exclusive jurisdiction and venue. Each party agrees to waive its right to a jury trial.

Section 16.12. Use of Police Power.

Nothing in this Agreement or any other Project Agreements limits the authority of the Department to exercise its regulatory and police powers granted by law, including but not limited to its powers of condemnation with respect to all or any part of the Project, the Project Right-of-Way and any of DTP's rights hereunder. The parties waive any requirement by the State Corporation Commission to issue a declaratory judgment regarding condemnation pursuant to Title 56, Chapter 22, Section 56-568, Code of Virginia.

Section 16.13. Survival

All covenants, agreements, representations and warranties made in or pursuant to this Agreement and all other Project Agreements shall be deemed continuing and made at and as of the date of this Agreement and all other Project Agreements and at and as of all other applicable times during the term of this Agreement and all other Project Agreements. All covenants, agreements, representations and warranties made in or pursuant to this Agreement and all other Project Agreements shall survive the expiration or earlier termination of this Agreement and all other Project Agreements, except as expressly set forth herein or in such other Project Agreements, and shall not be waived by the execution and delivery of this Agreement or any other Project Agreements, by completion of construction, by any investigation by the Department or by any other event except a specific written waiver by the party against whom waiver is asserted.

Section 16.14. Subpoena.

Except as provided by law, DTP may subpoena any Department personnel provided that DTP shall pay for such personnel's time at its fully burdened rate (including overhead and fringe benefits), together with all out-of-pocket expenses incurred, no later than 30 days after DTP's receipt of an Invoice reasonably documenting the amount of such time provided.

Section 16.15. Construction and Interpretation of Agreement.

(a) The language in all parts of this Agreement or any other Project Agreements shall in all cases be construed simply, as a whole and in accordance with its fair meaning and not strictly for or against any party. The parties hereto acknowledge and agree that this Agreement and the other Project Agreements have been prepared jointly by the parties and has been the subject of arm's length and careful negotiation over a considerable period of time, that each party has been given the opportunity to independently review this Agreement and the other Project Agreements with legal counsel, and that each party has the requisite experience and sophistication to understand, interpret and agree to the particular language of the provisions hereof. Accordingly, in the event of an ambiguity in or dispute regarding the interpretation of this Agreement or any other Project Agreements, this Agreement or any other Project Agreements shall not be interpreted or construed against the party preparing it, and instead other rules of interpretation and construction shall be utilized.

(b) If any term or provision of this Agreement or any other Project Agreements, the deletion of which would not adversely affect the receipt of any material benefit by either party hereunder, shall be held by a court of competent jurisdiction to be invalid or unenforceable, the remainder of this Agreement or any other Project

Agreements shall not be affected thereby and each other term and provision of this Agreement or any other Project Agreements shall be valid and enforceable to the fullest extent permitted by law. It is the intention of the parties to this Agreement or any other Project Agreements, and the parties hereto agree, that in lieu of each clause or provision of this Agreement or any other Project Agreements that is illegal, invalid or unenforceable, the parties in good faith shall supply as a part of this Agreement or any other Project Agreements an enforceable clause or provision as similar in terms to such illegal, invalid or unenforceable clause or provision as may be possible.

(c) The captions of the articles, sections and subsections herein are inserted solely for convenience and under no circumstances are they or any of them to be treated or construed as part of this instrument.

(d) References in this instrument to this "Agreement" mean, refer to and include this instrument as well as any riders, exhibits, addenda and attachments hereto (which are hereby incorporated herein by reference) or other documents expressly incorporated by reference in this instrument. Any references to any covenant, condition, obligation and/or undertaking "herein," "hereunder" or "pursuant hereto" (or language of like import) mean, refer to and include the covenants, conditions, obligations and undertakings existing pursuant to this instrument and any riders, exhibits, addenda, attachments or other documents affixed to or expressly incorporated by reference in this instrument. All terms defined in this instrument shall be deemed to have the same meanings in all riders, exhibits, addenda, attachments or other documents affixed to or expressly incorporated by reference in this instrument unless the context thereof clearly requires the contrary. Unless expressly provided otherwise, all references to Articles and Sections refer to the Articles and Sections set forth in this Agreement. Unless otherwise stated in this Agreement or any other Project Agreement, words which have well-known technical or construction industry meanings are used in this Agreement or any other Project Agreements or the Project Agreements in accordance with such recognized meaning. All references to a subsection “above” or “below” refer to the denoted subsection within the Section in which the reference appears.

(e) As used in this Agreement or any other Project Agreements and as the context may require, the singular includes the plural and vice versa, and the masculine gender includes the feminine and vice versa.

(f) This Agreement, its exhibits and the other Project Agreements are intended to be complementary and consistent with each other and shall, to the maximum extent possible, be construed according to such intent.

Section 16.16. Counterparts.

This instrument may be executed in two or more counterparts, each of which shall be deemed an original, but all of which together shall constitute one and the same instrument.

Section 16.17. Entire Agreement; Amendment.

(a) THIS AGREEMENT AND THE OTHER PROJECT AGREEMENTS (INCLUDING THE EXHIBITS HERETO AND THERETO) CONSTITUTE THE ENTIRE AND EXCLUSIVE AGREEMENT BETWEEN THE PARTIES RELATING TO THE SPECIFIC MATTERS COVERED HEREIN AND THEREIN. ALL PRIOR OR CONTEMPORANEOUS VERBAL OR WRITTEN AGREEMENTS, UNDERSTANDINGS, REPRESENTATIONS AND/OR PRACTICES RELATIVE TO THE FOREGOING ARE HEREBY SUPERSEDED, REVOKED AND RENDERED INEFFECTIVE FOR ANY PURPOSE. THIS AGREEMENT MAY BE ALTERED, AMENDED OR REVOKED ONLY BY AN INSTRUMENT IN WRITING SIGNED BY EACH PARTY HERETO, OR ITS PERMITTED SUCCESSOR OR ASSIGNEE. NO VERBAL AGREEMENT OR IMPLIED COVENANT SHALL BE HELD TO VARY THE TERMS HEREOF, ANY STATUTE, LAW OR CUSTOM TO THE CONTRARY NOTWITHSTANDING.

(b) This Agreement and the other Project Agreements attempt to set forth in full all requirements applicable under the PPTA as to the study, planning, design, acquisition, development, construction, management and financing of the Project and attempt to define in full the rights and responsibilities of each party in connection therewith. To the extent requirements and rights and responsibilities have not been addressed in this Agreement or any other Project Agreements, the parties agree to carry out their respective responsibilities in the spirit of cooperation contemplated by the PPTA, recognizing that they may not have defined in a sufficient detail or anticipated fully all activities necessary for the full implementation of the Project.

(c) If any provisions of this Agreement or any other Project Agreements are rendered obsolete or ineffective in serving their purpose by change in law, passage of time, financing requirements or other future events or circumstances, the parties agree to negotiate in good faith appropriate amendments to or replacements of such provisions in order to restore and carry out the original purposes thereof to the extent practicable; provided, however, that neither party is obligated to agree to any amendment or replacement which would reduce its rights or enlarge its responsibilities under this Agreement or any other Project Agreements in any material respect.

[Signatures On Next Page]

IN WITNESS WHEREOF, the parties, intending to be legally bound, have executed this Agreement on the date first written above.

DEPARTMENT OF RAIL AND PUBLIC TRANSPORTATION, a department of the Commonwealth of Virginia

By Karen J Rae

Name: Karen J. Rae
Title: Director, DRPT

Date June 11, 2004

DULLES TRANSIT PARTNERS, LLC,
a Virginia Limited Liability Company

By Roger Picard

Name: ROGER PICARD
Title: EXECUTIVE PROJECT DIRECTOR.

Date June 11, 2004

EXHIBIT A

DEFINITIONS

Acquisition Package has the meaning set forth in **Section 5.8(a)**.

Advisory Panel has the meaning set forth in **Section 1.8**.

Affiliate means (a) any Person which directly or indirectly through one or more intermediaries controls, or is controlled by, or is under common control with, DTP or any of its members, partners or shareholders holding an interest in DTP; and (b) any Person for which 10% or more of the equity interest in such Person is held directly or indirectly, beneficially or of record by (i) DTP, (ii) any of DTP's members, partners or 10% or greater shareholders or (iii) any Affiliate of DTP under part (a) of this definition. For purposes of this definition the term "control" means the possession, directly or indirectly, of the power to cause the direction of the management of a Person, whether through voting securities, by contract, family relationship or otherwise.

Agency Schedule means a list of milestones and dates for FTA approvals and Full Funding Grant Agreement(s) provided by the Department to DTP.

Agreement or **Comprehensive Agreement** has the meaning set forth in the first paragraph including all exhibits and as supplemented or amended from time to time.

Agreement Date means the date written on the cover page of the Comprehensive Agreement.

Approved Pre-CA Costs has the meaning set forth in **Section 6.3**.

ARS has the meaning set forth in **Section 3.2(b)(viii)**.

Authorized Department Representative means any person designated by the Director in writing to act on behalf of the Department.

Authorized DTP Representative means the Project Executive Director for DTP.

Bechtel Guarantor means Bechtel Systems & Infrastructure, Inc.

Board has the meaning set forth in **Section 13.4(a)**.

Business Day means any day other than a Saturday, Sunday or other day on which The New York Stock Exchange or banks are authorized or required to close in New York, New York or Richmond, Virginia.

Change Order means a written amendment to the terms and conditions of the Agreement issued in accordance with **Section 7.2** of the Agreement.

Claims means any and all claims, disputes, disagreements, causes of action, demands, suits or proceedings.

CMMR Contractor means the separate contractor(s) engaged by the Department to perform CMMR Services.

CMMR Services has the meaning set forth in **Section 5.9(e).**

Comprehensive Agreement Guarantees means the guarantees issued by Bechtel Guarantor and Washington Guarantor when the Comprehensive Agreement is executed in the form of **Exhibit E-1** to this Agreement.

Code means the Internal Revenue Code of 1986, as amended, and the United States Treasury Regulations proposed or in effect with respect thereto.

Conceptual Proposal has the meaning set forth in **Section 1.6**.

Condemnation Package has the meaning set forth in **Section 5.7(b)**.

Contract Price means the price agreed to by Department and DTP for the Design-Build Work for a Project Phase in accordance with **Section 8.2** or **Section 8.3**, as applicable, which will be set forth with respect to a Project Phase in the Phase Supplement to the Design-Build Contract.

CPM Schedule means DTP's comprehensive, critical path schedule for the performance of the Design-Build Work, which will comply, with the requirements of the Design-Build Contract.

Core Development Work has the meaning set forth in **Section 5.2(a)**.

DBE has the meaning set forth in **Section 9.3**.

days means calendar days, unless otherwise designated.

Deferred Costs has the meaning set forth in **Section 6.1** with respect to Phase 1 Development Work and Phase 1 and Phase 2 Preliminary Engineering Work, and in **Section 6.1(e)** with respect to Phase 2 Development Work.

Department has the meaning set forth in the first paragraph and includes any other State agency succeeding to the powers, authorities and responsibilities of the Department under the Comprehensive Agreement.

Department-Caused Delays means delays, to the extent that they affect a critical path and which DTP could not have reasonably avoided (without additional cost to DTP), arising from the following matters and no others: (a) a suspension order pursuant to **Section 12.22**, (b) Directed Changes, (c) failure of Department or WMATA to provide responses to submittals and matters for which response is required (including any failure of the Department or WMATA due to failure of third parties to provide comments or responses in a timely manner), within the time periods indicated in the approved Master Project Schedule, and if not set forth in the approved Master Project Schedule, then as set forth in the Agreement, (d) Department's failure to obtain any Department Regulatory Approvals by the dates designated therefor in the approved Master Project Schedule, (e) any other failure of the Department or WMATA to perform a material obligation under this Agreement within the relevant time period set forth in this Agreement, (f) any improper failure to act by Department or WMATA within a reasonable time after delivery of notice by DTP to Department requesting such action, and (g) changes in the Development Work and/or Preliminary Engineering Work which are directly attributable to delays caused by bad faith actions, active interference, gross negligence or comparable tortious conduct by Department or WMATA.

Department Default has the meaning set forth in **Section 12.16**.

Department Event of Default has the meaning set forth in **Section 12.15(a)**.

Department Governmental Approvals has the meaning set forth in **Section 3.2(b)(vi)**.

Design-Build Duties has the meaning set forth in **Section 3.1(d)**.

Design-Build Guarantees means the guarantees issued by the Bechtel Guarantor and the Washington Guarantor when the Design-Build Contract is executed in the form of **Exhibit E-2** to this Agreement.

Design-Build Work means the scope of work for final design and construction for each Project Phase, which shall be defined in the Phase Supplements to the Design-Build Contract and shall include compliance with DTP's obligations under the Design-Build Contract.

Design-Build Contract means the Design-Build Contract between Department and DTP to be negotiated and executed at a future date including any and all mutually agreed amendments and supplements thereto.

Detailed Proposal has the meaning set forth in **Section 1.9**.

Development Work means the scope of work for development services described in **Exhibit F-1** with respect to Phase 1 and to be described in **Exhibit H** with respect to Phase 2.

Deviation means a deviation from the Project Standards for Preliminary Engineering, the General Plans or from the standards or criteria of MWAA, VDOT or other third party.

Differing Site Condition means any permanent condition on, within, under or in the Project Right of Way differing materially from those identified in the Geotechnical Report prepared as part of the Preliminary Engineering Work in accordance with **Exhibit G-1**, Section 4.2.3, unless due to DTP negligence in preparing the Geotechnical Report.

Directed Change means any change in the Development Work and/or Preliminary Engineering Work (including changes in the Project Standards for Preliminary Engineering) which Department has directed DTP to perform by Directive Letter or by Directed Change.

Directive Letter means each letter issued by the Department to DTP in the event of any dispute regarding Development Work and/or Preliminary Engineering Work required by the Agreement.

Director means the Director of the Virginia Department of Rail and Public Transportation.

Dispute means a controversy, matter in question, or difference of opinion that remains unresolved following good faith negotiations between representatives of the Department and DTP. Disputes may include such matters as Change Orders, interpretation of the Agreement, or costs and time for performance.

DTP has the meaning set forth in the first paragraph.

DTP Party means DTP and any Affiliate thereof or and any Subcontractor of any tier, and their respective employees, agents, representatives, Subcontractors, and officers and all other entities for whom DTP may be legally or contractually responsible.

DTP Default has the meaning set forth in **Section 12.13**.

DTP Event of Default has the meaning set forth in **Section 12.12**.

Dulles Corridor has the meaning set forth in **Section 1.6**.

EIS means that signed final environmental impact statement whose record of decision for the Project will be approved by FTA.

Environmental Laws means all Laws, Regulations and Ordinances now or hereafter in effect during the term of this Agreement relating to the environment or to emissions, discharges, releases or threatened releases of

Hazardous Substances into the environment including into the air, surface water or ground water or onto land, or relating to the manufacture, processing, distribution, use, treatment, storage, disposal, transport or handling of Hazardous Substances or otherwise relating to the protection of public health, public welfare or the natural environment (including protection of nonhuman forms of life, land, surface water, groundwater and air) including the statutes listed in the definition of Hazardous Substances; the National Environmental Policy Act, as amended, 42 U.S.C. § 4321 et seq.; the Occupational Safety and Health Act, as amended, 29 U.S.C. § 651 et seq.; the Hazardous Materials Transportation Act, as amended, 49 App. U.S.C. § 1801 et seq.; the Endangered Species Act, as amended, 16 U.S.C. § 1531 et seq.; the Clean Water Act, as amended, 33 U.S.C. § 1251 et seq.; and the Migratory Bird Treaty Act, 16 U.S.C. § 703 et seq.

Event of Default, for purposes of the Design-Build Contract, shall have the meaning set forth therefor in the Design-Build Contract.

Excusable Delay has the meaning set forth in **Section 7.2(f)(ii)**.

Fixed Price Proposal has the meaning set forth in **Section 8.1**.

Fixed Price for Preliminary Engineering Work means the fixed price set forth in **Exhibit G-2**.

Force Majeure means any of the following events (provided such events are beyond the control of DTP and are not due to a negligent act or omission of DTP) which materially and adversely affects DTP's obligations hereunder and which event (or the effects of which event) could not have been avoided by due diligence and use of reasonable efforts by DTP:

(a) any tidal wave, hurricane force wind, flood, tornado, fire, or earthquake or other acts of God causing significant damage to the project office not due to the negligence of DTP,

(b) any epidemic, blockade, rebellion, war, riot or act of sabotage, terrorism or civil commotion, explosion, malicious act or similar occurrence;

(c) any strike, labor dispute, work slowdown, work stoppage, secondary boycott, walkout or other similar occurrence, except as excluded under **Subsection (i)** below;

(d) any unreasonable delay by a utility owner in connection with a Utility Relocation;

(e) any change in or new enactment of any written Laws, Regulations and Ordinances, or change in the judicial or administrative interpretation of, or adoption of any new Laws, Regulations and Ordinances which is materially inconsistent with Laws, Regulations and Ordinances in effect on the Agreement Date (subject to the exclusions set forth below);

(g) any court order which restrains, enjoins, challenges, suspends or delays performance of the Development Work and/or Preliminary Engineering Work or the granting or renewal of any Regulatory Approval, including any order delaying completion of condemnation proceedings or relocation beyond the time periods provided by law.

The term "Force Majeure" shall be limited to the matters listed above and specifically excludes from its definition the following matters which might otherwise be considered force majeure:

(i) strike, labor dispute, work slowdown, work stoppage, secondary boycott, walkout or other similar occurrence particular to a DTP Party or the Project except any such event affecting a Subcontractor's work solely at locations other than the Project site;

(ii) the presence at, near or on the Site of any Hazardous Substance;

(iii) the presence at, near or on the Site of any archaeological, paleontological or cultural resource or endangered species;

(iv) Differing Site Conditions;

(v) the suspension, termination, interruption, denial or failure to obtain or non-renewal of any permit, license, consent, authorization or approval which is necessary for the performance of the Development Work and/or Preliminary Engineering Work, except for any such matter resulting from a lawsuit by any utility that unreasonably delays a Utility Relocation;

(vi) a change in any Laws, Regulations and Ordinances (such as increases in tax rates other than Fairfax County Gross Receipts Tax) which causes in increase in amounts payable by DTP for deliverables but which does not change the obligations to be performed by DTP hereunder;

(vii) Directed Changes;

(viii) any cost risk (including cost of delay) for which coverage is to be provided through insurance expressly required hereunder; and

(ix) all other matters not caused by the Department or beyond the control of the Department and not listed in **Subsections (a)** through **(g)** above.

FTA means the Federal Transit Administration.

General Plans means the general plans for the Project approved by the WMATA board of directors as part of the NEPA process, dated June 2002, as they may be amended or supplemented.

Guaranteed Final Completion Date means the date by which DTP agrees to achieve Final Acceptance (as defined in the Design-Build Contract) of the Design-Build Work for a Project Phase including the punch list items and landscaping as such date may be adjusted by Change Order under the Design-Build Contract.

Guaranteed Substantial Completion Date means the date by which DTP agrees to achieve Substantial Completion of the Design-Build Work for a Project Phase as such date may be adjusted by Change Order under the Design-Build Contract.

Guaranteed Testing Readiness Date means the date by which DTP agrees to achieve the level of completion of the Design-Build Work for a Project Phase necessary for WMATA to commence systems testing as such date may be adjusted by Change Order under the Design-Build Contract.

Hazardous Substance means (a) any substance, product, waste or other material of any nature whatsoever which is or becomes listed, regulated, or addressed pursuant to the Comprehensive Environmental Response, Compensation and Liability Act, 42 U.S.C. Section 9601 et seq., the Hazardous Materials Transportation Act, 49 U.S.C. Section 1801 et seq., the Resource Conservation and Recovery Act, 42 U.S.C. Section 6901 et seq., the Toxic Substances Control Act, 15 U.S.C. Section 2601 et seq., the Clean Water Act, 33 U.S.C. Section 1251 et seq., the Clean Air Act, 42 U.S.C. Section 7401 et seq., the Federal Insecticide, Fungicide and Rodenticide Act, 7 U.S.C. Section 136 et seq., Virginia Waste Management Act, Section 0.1-1400 et seq., Code of Virginia (1950) as amended, all as amended or as may be amended, or any other federal, state or local statute, law, ordinance, resolution, code, rule, regulation, order or decree regulating, relating to, or imposing liability or standards of conduct concerning, any contaminated, polluted, hazardous, toxic or dangerous waste, substance or material, as now or at any time hereafter in effect, (b) any substance, product, waste or other material of any nature whatsoever which may give rise to liability under any of the above statutes, (c) petroleum or crude oil or products thereof other than petroleum and petroleum products which are contained within regularly operated motor vehicles, (d) asbestos and (e) radioactive wastes and substances.

Implementation Guidelines means the Implementation Guidelines under the PPTA adopted by the Commissioner on July 1, 1995 governing the selection of Qualifying Transportation Facilities under the purview of Department, as such Implementation Guidelines may be amended or supplemented.

Incentive Payments means those payments, in the aggregate, that the Department is contractually obligated to make to DTP in accordance with **Section 6.5**.

Incremental Development Work has the meaning set forth in **Section 5.2(b)**.

Invoice means an invoice for payment in the form of **Exhibit O** submitted by DTP to DRPT under the Agreement**.**

Key Personnel means the project executive director, project director, policy relations manager, ROW coordinator, QA/QC manager, environmental coordinator, business controls manager, cost/schedule engineer, technical program manager, commercial manager, financial manager, utility coordinator, the community and public relations consultant, environmental consultant, permitting manager, utility coordination consultant, ROW acquisition agent, financial advisor, and the persons or firms performing stakeholder relations, development relations, permitting support and stakeholder support.

Laws, Regulations and Ordinances means all applicable laws, codes, rules, ordinances, restrictions and regulations of the federal, State, regional or any local government (including those resulting from the initiative or referendum process) and judicial or administrative orders.

Liquidated Damages means the liquidated damages to be paid under and in accordance with the Design-Build Contract.

Master Project Schedule has the meaning set forth in **Section 7.1(b)**.

Maximum Payment Curve means the Preliminary Engineering Maximum Payment Curve set forth in **Exhibit G-2**, or the exhibit to the Design- Build Contract that identifies the maximum amount payable by the Department to DTP in aggregate in any given month for the performance of the Preliminary Engineering Work or Design-Build Work, respectively.

Milestones means the significant deliverables or levels of completion for the Project identified in **Sections 4.2 and 5.2(a).**

Milestone Dates means the dates set forth in **Sections 4.2 and 5.2a** by which Milestones are to be attained, as such dates may be adjusted by Change Orders.

MWAA means the Metropolitan Washington Airports Authority and any successor thereto.

Notice to Proceed means a written notice issued by the Department authorizing DTP to commence Development Work, Preliminary Engineering Work or Design-Build Work.

Notice of Termination means a notice issued by either Party to terminate the Comprehensive Agreement and the performance of the Development Work and Preliminary Engineering Work by DTP pursuant to **Article XII** of the Agreement.

Other Direct Costs means non-labor direct costs and Project office costs as described in **Exhibit F-2**, parts C and D.

Person means any individual, public or private corporation, county, district, authority, municipality, political subdivision or other entity of the State or the United States of America, and any corporation, limited liability company, joint venture, partnership, association, firm, trust, estate, or any other entity whatsoever.

Phase Design-Build Work means the Design-Build Work with respect to a Project Phase.

Phase Supplement means the fully executed supplemental agreement for a Project Phase.

Phase I Environmental Site Assessment means a study that meets the requirements of 42 U.S.C. Section 9601 (35) (B), as amended and at a minimum, meets the requirements of ASTM Standard 1527-97.

Phase II Environmental Site Assessment means a study that meets the requirements of 42 U.S.C. Section 9601 (35) (B), as amended and at a minimum, meets the requirements of ASTM Standard 1903-97.

PPTA has the meaning set forth in **Section 1.1** and is codified as Title 56, Chapter 22, Section 56-556 et seq., Code of Virginia, as amended from time to time.

Pre-CA Costs means the costs incurred by DTP prior to the Agreement Date to develop the Project including, but not limited to, DTP members' costs, consulting expenses, Subcontractors, in kind services, and other contributions but excluding costs incurred by DTP after April 23, 2003 pursuant to task orders issued by the Department.

Pre-Existing Hazardous Substances means any Hazardous Substance that was present within the Project Right of Way limits prior to acquisition of this property for the Project, and which was not placed or deposited there by the Contractor.

Preliminary Engineering Work means the Preliminary Engineering Scope of Work as defined in **Exhibit G-1**.

Preliminary Engineering Plans and Specifications means the drawings and specifications for a Project Phase prepared by or on behalf of DTP as part of and in accordance with the Preliminary Engineering Work for such Project Phase and submitted to and approved by the Department and WMATA.

Pricing Documents has the meaning set forth in **Section 8.5(a)**.

Project means all improvements constituting the Dulles Corridor Rapid Transit Project which as of the Agreement Date is defined in **Exhibit B** which will eventually be further defined after conclusion of the EIS process and approval of the Preliminary Engineering Plans and Specifications.

Project Agreement means any of the Agreement, Comprehensive Agreement Guarantees, Design-Build Contract and Design-Build Guarantees.

Project Financial Plan means the Dulles Corridor Rapid Transit Project Preliminary Financial Plan – Phase 1, dated August 2003, and updated in February 2004, submitted by the Department to the Federal Transit Administration for the Request to Enter Rail Preliminary Engineering.

Project Office means the office leased by DTP in the vicinity of the Project which office is where DTP and certain personnel from DTP, its subcontractors, Department and WMATA dedicated to the Project will be co-located.

Project Purposes means and is limited to the developing, permitting, design, financing, acquisition, construction, installation, and equipping of the Project. Project Purposes exclude, however, any activities associated with Reserved Rights.

Project Right of Way means all real property (which term is inclusive of all estates and interests in real property), which is necessary for ownership and operation of the Project by Department. The term specifically includes all property within the access control line for the Project. The term specifically excludes any temporary easements or other real property interests, which DTP deems necessary or advisable in connection with construction of the Project and/or utility relocations.

Project Phase or Phase means a geographic Phase or segregable portion of the Project. The different Project Phases are described in **Exhibit B.**

Project Standards for Preliminary Engineering has the meaning set forth in **Section 4.3**.

Qualifying Transportation Facility shall have the meaning assigned to such term in Section 56-557 of the PPTA.

Realized Cost Savings has the meaning set forth in **Section 6.5(e)**.

Recovery Plan has the meaning set forth in **Section 7.1(g)**.

Regulatory Approvals means all local, regional, state and federal agreements, studies, findings, permits, approvals, authorizations, certifications, consents, decisions, exemptions, filings, leases, licenses, registrations, rulings and other governmental authorizations, other than the Department Governmental Approvals, required to be obtained or completed under applicable Laws, Regulations and Ordinances prior to undertaking any particular activity contemplated by the Comprehensive Agreement or any other Project Agreement. The term "Regulatory Approvals" includes the EIS.

Related Party means Bechtel Infrastructure Corporation, Washington Group International, Inc., and any Affiliate thereof.

Reserved Rights means all rights reserved to the Department under **Section 15.1** of the Comprehensive Agreement.

Responsible Public Entity shall have the meaning assigned to such term in Section 56-557 of the PPTA and means the Department.

Right of Way Acquisition Plan means the Right of Way Acquisition Plan for a Project Phase prepared by DTP and approved by the Department in accordance with the Comprehensive Agreement and in substantial conformity with VDOT's Manual of Instruction – Right-of-Way Acquisitions.

Right of Way Plans means the Project Right of Way Plans for a Project Phase prepared by DTP and approved by the Department in accordance with the Comprehensive Agreement and in substantial conformity with VDOT's Manual of Instruction – Right-of-Way Acquisitions.

Schedule of Values means the schedule set forth in **Exhibit G-2** or the exhibit to the Design-Build Contract that identifies dollar values for work items for the Preliminary Engineering Work or Design-Build Work for a Project Phase, as applicable.

Standards Board means the Standards Board described in **Section 4.3(b)**.

State has the meaning set forth in the first paragraph.

State Indemnitee means and includes Department, the Director, the Commonwealth Transportation Board, the State, WMATA, MWAA, VDOT and TRIP II and all elected representatives, appointed officials, commissioners, officers, members, employees, authorized agents and authorized representatives of any of them.

Subcontract means any agreement by DTP with any other Person to perform any part of the Development Work and/or Preliminary Engineering Work or provide any materials, equipment or supplies for any part of the Development Work and/or Preliminary Engineering Work, or any such agreement at a lower tier, between a Subcontractor and its lower tier Subcontractor.

Subcontractor means any Person with whom DTP has entered into any Subcontract to perform any part of the Development Work and/or Preliminary Engineering Work or provide any materials, equipment or supplies for the Development Work and Preliminary Engineering Work on behalf of DTP (and any other Person with whom any Subcontractor has further subcontracted any part of the Development Work and Preliminary Engineering Work).

Substantial Completion means the level of completion of the Design-Build Work for a Project Phase in accordance with the plans and specifications therefor and the Design-Build Contract which renders the Project Phase safe and capable of being operated subject to completion of punch list items and landscaping, and all conditions to Substantial Completion in the Design-Build Contract have been satisfied.

Tasked Development Work has the meaning set forth in **Section 5.2(c)**.

Termination for Public Convenience means a termination by the Department pursuant to **Section 12.2**.

Typical Agency D/B Approach Price Date has the meaning set forth in **Section 6.5(b)**.

Typical Agency D/B Approach Execution Date has the meaning set forth in **Section 6.5(c)**.

TRIP II means the owner of the private toll road located in the Dulles Corridor extending from the Dulles International Airport to Leesburg in Loudoun County, VA.

Utility Relocations has the meaning set forth in **Section 7.8(b)**.

Value Planning Report has the meaning set forth in **Section 4.3(f)**.

VDOT means the Virginia Department of Transportation.

Washington Guarantor means Washington Group International, Inc. (Delaware).

WMATA means the Washington Metropolitan Area Transit Authority.

Work Product means all the data, information, documentation and other work product deliverable by or on behalf of DTP and in any way related to the Project or Project Right of Way including, but not limited to, engineering documents, geotechnical soils and soil boring data, analyses, reports and records, the Right of Way Plans, property acquisition files, agreements and documents (including records of payment and related correspondence, title policies, parcel diaries and all documents described in **Section 5.7(b)**), engineers' and inspectors' diaries and reports, utility relocation plans and agreements, right of way record maps and surveys, traffic and revenue studies, and other feasibility data, analyses, studies and reports, correspondence and memoranda relevant to design or construction decisions, contracting plans, air quality monitoring data, environmental reviews, studies and reports, mitigation studies and reports, data, assessments, studies and reports regarding Hazardous Substance investigations, testings, borings, monitoring and analyses, manifests regarding handling, storage or transportation of Hazardous Substances, correspondence and agreements relating to Regulatory Approvals, Change Orders, final quantities, pile driving records, records of accidents and traffic management, field test records and reports, concrete pour records, surfacing depth check records, grade and alignment books, cross-section notes, drainage notes, photographs, false work and form plans, records of construction materials, and any other documents which can be reasonably described as technical or engineering documents. Work Product expressly excludes, however; (i) documents and information which DTP and Department mutually agree in writing, or which a court determines, to be exempted or protected from public disclosure under **Section 14.2** of the Comprehensive Agreement and which is not conceived or first reduced to practice for Project Purposes; and (ii) any documents and information not specifically required by the Comprehensive Agreement to be delivered to the Department.

EXHIBIT B

PROJECT DEFINITION AND PHASE DESCRIPTIONS

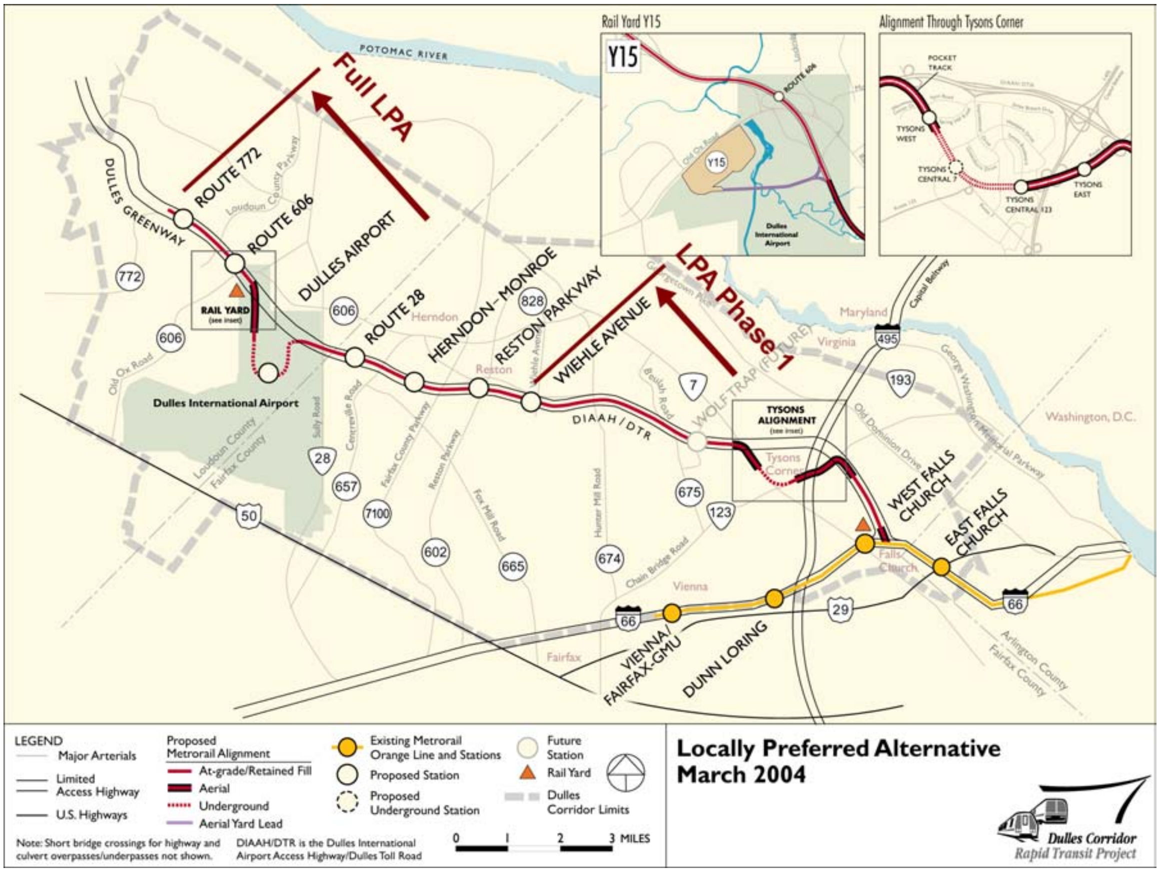
Project Definition - The Locally Preferred Alternative (LPA), developed as part of the Dulles Corridor Rapid Transit Project's Environmental Impact Statement (EIS) process, is the extension of Metrorail from the existing Metrorail Orange Line near the West Falls Church Station, through Tysons Corner, to Reston/Herndon and Washington Dulles International Airport, and terminating at Route 772 in eastern Loudoun County, Virginia.

This 23.1-mile extension of Metrorail includes 11 new Metrorail Stations, a new service and inspection yard on Dulles International Airport property, an expansion of the existing service and inspection yard at West Falls Church, traction power substations, tie-breaker stations, and stormwater management ponds. The proposed alignment uses the median of the Dulles Connector Road, Dulles International Airport Access Highway (DIAAH) and Dulles Greenway. The alignment diverges from these routes to serve Tysons Corner and Dulles Airport.

The LPA will be implemented in two phases as described below.

LPA Phase 1 Description –LPA Phase 1 of the Project (as described in the Supplemental Draft Environmental Impact Statement, October 2003) will be the initial 11 miles of the Project from the current Metrorail Orange Line (near the West Falls Church Station) to Wiehle Avenue. It will include 5 stations, an expansion of the existing service and inspection yard at West Falls Church, ancillary facilities (traction power substations, tie-breaker stations and stormwater management ponds), a pocket track located west of Wiehle Avenue Station and tail tracks outbound of the interim terminus at Wiehle Avenue. Phased construction may require additional refinements to some facilities such as modified site plans for stations to meet adjustments in parking programs and bus bays, improve access and circulation, and respond to the concerns of local jurisdictions and landowners.

LPA Phase 2 Description - LPA Phase 2 of the Project will complete construction of the LPA between Wiehle Avenue and Route 772 in Loudoun County, add 6 additional stations, ancillary facilities (traction power substations, tie-breaker stations and stormwater management ponds), a new service and inspection yard and tail tracks outbound of the terminus at Route 772. Phased construction may require additional refinements to some facilities.



Note: Short bridge crossings for highway and culvert overpasses/underpasses not shown.

DIAAH/DTR is the Dulles International Airport Access Highway/Dulles Toll Road

Locally Preferred Alternative
March 2004

EXHIBIT C

Term Sheet for Design-Build Contract

The terms summarized herein are not intended to be final or conclusive as to all terms needed and will, in all events, be subject to negotiation of definitive terms and conditions of the Design-Build Contract. Any binding obligations will only arise under definitive agreements mutually satisfactory to the parties. Capitalized terms used that are not defined herein have the respective meanings set forth in the Agreement.

The parties recognize the Washington Metropolitan Area Transit Authority's ("WMATA") role as set forth in the Comprehensive Agreement in Section 3.5. This section states that "[a]s the ultimate owner and entity responsible for operation and maintenance of the completed Metrorail extension, WMATA will serve as the day-to-day Technical Manager for Preliminary Engineering. WMATA will provide project management services to DRPT through an intergovernmental agreement (Second Agreement) under which DRPT has delegated WMATA limited authority to manage the day-to-day activities of Preliminary Engineering. DTP will receive technical direction and report to the WMATA Senior Project Manager for Preliminary Engineering activities in accordance with the DRPT issued scope of work. Any decisions that impact Project scope, schedule, or budget must be approved in advance by DRPT. After all construction and start-up related contracts have been closed out, DRPT intends to transfer the Project's line, facilities, and systems to WMATA for operation, maintenance, and ultimate ownership. Upon completion of WMATA's safety certification process and WMATA's acceptance of the Project into the Adopted Regional System (ARS), in accordance with WMATA Compact procedures, WMATA will operate and maintain the new rail line as an integrated element of the full Metrorail and Metrobus system."

Design-Build Contractor	DTP shall execute the Design-Build Contract and be the Design-Build Contractor. DTP shall subcontract the design and construction of the Project to a joint venture of Bechtel Infrastructure Corporation and Washington Group International, Inc.
Scope of Work	The Design-Build Contractor will execute or cause the execution of all work necessary to perform the Design-Build Work excluding obligations that the Design-Build Contract specifies are to be performed by others. The Design-Build Contract will specify the elements of the approved 100% Preliminary Engineering Plans and Specifications, as they may be modified by the mutual agreement of the parties, including but not limited to the process outlined in Section 4.3, "Project Standards", of the Comprehensive Agreement as part of the negotiation of the

	Contract Price, with which the Design-Build Contractor is obligated to comply ("Design-Build Basis"). The Design-Build Basis will serve as the detailed description of the scope of the Design-Build Work.
Design-Build Basis	Design-Build Contractor understands and agrees that the Design-Build Basis will be prepared solely by Design-Build Contractor, and Department shall not be responsible or liable in any respect for any loss, damage, injury, liability, cost, expense or cause of action whatsoever suffered by Design-Build Contractor, its employees, agents, officers or Subcontractors or any other Persons for whom Design-Build Contractor may be legally or contractually responsible, by reason of any use of any information contained in the Design-Build Basis or any action or forbearance in reliance thereon except for errors, omissions, inconsistencies or other design defects that are due to a deficiency in a required Department, VDOT or WMATA design standard as identified in the Basis of Design Report which (A) is not known to DTP or (B) although known to DTP is communicated in writing to the Department, VDOT or WMATA and which requirement is not waived or modified by the Department, VDOT or WMATA.
Design Review	The Design-Build Contractor will submit and the Department will review and comment and/or approve design submissions in accordance with the time periods set forth in the Design-Build Contract. The Department's basis for disapproving design submissions will be established in the Design-Build Contract. DTP will be able to submit the design on Project phases (as opposed to the entire Project). Failure to approve within the time periods will not constitute automatic approval of an item.
Deviations	A change order or approved deviation request is required in order to permit any deviation from the Design-Build Work or Design-Build Basis. Deviations will be processed in accordance with Section 4.3, "Project Standards", of the Comprehensive Agreement, except that time periods for review and approval will be set forth in the Design-Build Contract. For deviations that result from the Design-Build Contractor's value engineering efforts after execution of the Design-Build Contract, the Contract Price shall be reduced by an amount to be negotiated.

	The treatment of changes to the design of the Project that do not involve deviations from the Design-Build Work or Design-Build Basis and non-material, non-controversial deviations in the field will be established in the Design-Build Contract. Department shall consider in good faith, but has no obligation to approve, any application for a deviation.
Schedule	Design-Build Contractor shall provide a comprehensive critical path schedule satisfying the requirements of the Design-Build Contract. The schedule's level of detail shall be that required by the Design-Build Contractor to execute the Design-Build Work. The Design-Build Contractor shall provide the Department with a monthly updated schedule. The Design-Build Contractor shall be entitled to modify the schedule as long as it does not extend Milestone Dates or modify the obligations of the Department without Department's consent. These Milestone Dates will be defined in the Design-Build Contract. Design-Build Contract will include a Guaranteed Testing Readiness Date, Guaranteed Substantial Completion Date and Guaranteed Final Completion Date. If any updated schedule shows that Design-Build Contractor will not reach a Milestone by the Milestone Date, Design-Build Contractor shall provide a recovery plan with a revised schedule.
Liquidated Damages	Per day Liquidated Damages (in amounts to be negotiated) will be assessed for unexcused delay in achieving Guaranteed Substantial Completion Date and other dates as specified in the Design-Build Contract. Liquidated Damages shall not be considered a penalty and are the sole remedy for late completion until a specified number of days after the Guaranteed Substantial Completion Date or such other dates as are specified in the Design-Build Contract, after which time the Department shall have the right to terminate for default, subject to such terms and conditions as may be specified in the Design-Build Contract. The Liquidated Damages will be capped in the aggregate in an agreed upon amount.
Performance Standards and Warranties	Performance Standards: Design-Build Contractor will perform the Design-Build Work in accordance with the following performance standards and others as specified in the Design-Build Contract: Design in accordance with professional engineering

	principles generally accepted as standards of the industry in the State and Design-Build Standards, Design-Build Basis and in accordance with Design-Build Contract and other provisions as set forth in the Design-Build Contact. Construction will be in a good and workmanlike manner using new good quality materials (subject to specified standards in the Preliminary Engineering Plans and Specifications), free from defects, and be in conformance with the Design-Build Contract. Warranty: Prior to Final Completion, Design-Build Contractor will correct any Design-Build Work that is not in compliance with the performance standards or the Design-Build Contract. After expiration of the warranty period, Design-Build Contractor shall assign to the Department longer manufacturer warranties, if any, on any equipment or materials supplied. Design-Build Contractor shall be responsible for enforcing subcontractor warranties before assignment to the Department. Post Warranty Liability. Commencing five years after Final Completion, Design-Build Contractor shall have no continuing liability for non-compliance with the performance standards. Exclusions from this termination of liability shall be established in the Design-Build Contract. Provisions associated with warranty obligations, including time periods, will be set forth in the Design-Build Contract.
Indemnification	Design-Build Contractor to indemnify State Indemnitees for liens, violation of law, failure to pay taxes and infringement of intellectual property. Design-Build Contractor shall indemnify State Indemnitees for any third party property damage, death and bodily injury arising out of the Design-Build Work due to its negligence or fault, subject to any limitations as may be set forth in the Design-Build Contract. Design-Build Contractor shall indemnify State Indemnitees for claims from its employees or from its subcontractors or their employees. Indemnities shall exclude the portion of liability attributable to

	the culpability of a State Indemnitee to the extent provided in the Design-Build Contract. Design-Build Contractor’s indemnification obligations shall not extend to any injuries or loss arising from acts of terrorism. Design-Build Contractor shall indemnify the Department for Hazardous Substances that Design-Build Contractor brings on to any Project Right of Way and for actions with respect to pre-existing Hazardous Substances as may be set forth in the Design-Build Contact. Claims shall be brought in accordance with defense and indemnification procedures set forth in the Design-Build Contract. Time limits on Design-Build Contractor indemnity periods and other indemnity issues will be specified in the Design-Build Contract.
Insurance	The insurance program should be a modified contractor-controlled insurance program or owner-controlled insurance program consisting of the following coverages: Commercial General Liability insurance that would be primary for the Design-Build Contractor and the Department and excess for the subcontractors (who would each provide a specified amount in commercial general liability policies). Workers’ compensation coverage to be provided by the Design-Build Contractor for its employees and by each subcontractor for its employees. Builder’s risk insurance covering Design-Build Contractor, subcontractors and the Department as insureds. The specific errors and omissions insurance requirements will be identified at a future date. Railroad Protective Liability Insurance. At the time that the Fixed Price Proposal for the Design-Build Work is submitted to the Department, the Design-Build Contractor will propose a detailed insurance program which may include a full contractor-controlled insurance program or

	owner-controlled insurance program (i.e. workers compensation and primary comprehensive general liability insurance for the subcontractors). The parties agree that such insurance program will be for amounts deemed by the parties adequate for a Project of this size and type and will include completed operations periods or tails that are consistent with the term of the Design-Build Contractor's indemnification obligation. Design-Build Contractor shall have risk of loss to the Design-Build Work until such date as specified in the Design-Build Contract unless due to acts of terrorism if not insured under the Builders Risk.
Payment and Performance Bonds	Within 10 days after Notice-To-Proceed, Design-Build Contractor shall provide payment and performance bonds in an amount not to exceed $500 million, which amount will be reduced upon Final Acceptance to a level appropriate for warranty work or a separate warranty bond shall be provided in such amount. The Department and the Design-Build Contractor will use their best efforts to obtain any required waiver from the FTA with respect to the bond amount.
Retention	The retention and reduction of retention will be established in the Design-Build Contract. The Department will pay interest on any cash retention on the terms and in an amount to be negotiated. Upon the Guaranteed Final Completion Date, Department shall release any remaining retention, provided that Liquidated Damages are not then payable or anticipated to become payable to the Department, and amounts are not otherwise required to cover any existing or threatened liens, claims and similar matters. Design-Build Contractor shall have the right to post an irrevocable letter of credit or bond in lieu of retention.
Change Orders	DTP shall be entitled to an equitable adjustment in the Contract Price and the Guaranteed Testing Readiness Date, Guaranteed Substantial Completion Date and Guaranteed Final Completion Date and/or to the Contract Price if an event such as the following occurs and causes delay to the critical path or increased costs:

	-Delays which are proximately attributable to Force Majeure events as defined in the Design-Build Contract; -Department-Caused Delays as defined in the Design-Build Contract; - Owner-directed changes as Defined in the Design-Build Contract; - Differing Site Conditions as defined in the Design-Build Contract. During the negotiation of the Design-Build Contract, other change order events will be specified, including events which are not eligible for change orders. Whether an event is eligible for a time extension or cost increase or both will be set forth in the Design-Build Contract.
Limitation of Liability	Exclusion of Consequential Damages: A mutual exclusion of consequential damages of the parties, if any, shall be negotiated in connection with the Design-Build Contract. The exclusion does not limit Design-Build Contractor's liability for Liquidated Damages required under the Design-Build Contract, damages to the extent covered by insurance proceeds from specified insurance, Design-Build Contractor's right to a change order under the Design-Build Contract and other items to be specified in the Design-Build Contract. Cap on Aggregate Liability: A cap on Design Build Contractor's total liability, applicable to any and all damages and losses from all causes in an amount not to exceed a mutually agreed percentage of the Contract Price which shall exclude damages to the extent covered by specified insurance proceeds and other items to be specified in the Design-Build Contract shall be negotiated in connection with the Design-Build Contract. Applicability: All limitations of liability and releases bind all successors and assigns of each party. Exclusivity: The remedies in the Design-Build Contract are exclusive of any other remedies, except to the extent stated therein.
Payment Provisions	Monthly progress payments (due and payable within 30 days of final approved Invoice) to be measured by a Schedule of Values and subject to the Maximum Payment Curve. Late payments will be subject to the rate of interest set forth in the Design-Build Contract. The Design-Build Contract will establish appropriate mobilization payments.

Disputes	The parties will participate in a meaningful partnering process. All disputes that are incapable of being resolved at the project level will be subject to a dispute resolution board for non-binding resolution. Disputes not resolved by the Dispute Resolution Board (DRB) shall be resolved solely in accordance with the provisions in the Design-Build Contract.
Termination for Convenience	The Department shall have the right to terminate the Design-Build contract for convenience in its sole discretion. Payments to the Contractor upon termination and further obligations by the Contractor to the Department will be specified in the Design-Build Contract. Such agreed amount or amounts payable for the terminated Work shall not exceed the total Contract Price as reduced by the Contract Price of Design-Build Work not terminated except to the extent specified in the Design-Build Contract.
Termination for Default	The Events of Default and cure periods shall be as specified in the Design-Build Contract.
Completion Guarantees	Design-Build Contractor shall provide guarantees in a form set forth in Exhibit E-2 to the Comprehensive Agreement guaranteeing the performance of the Design-Build Work, from Bechtel Systems & Infrastructure, Inc. and Washington Group International, Inc. (Delaware).
Remediation of Hazardous Substances	The remediation of Hazardous Substances, shall be as specified in the Design-Build Contract.
Other Issues	The Design-Build Contract will also contain provisions including, but not limited to, the following: 1. Allocation of responsibility to provide Governmental Approvals. 2. QA/QC 3. Utilities and railroad-related work. 4. DBE, Small Business, EEO, Key Personnel and Subcontract. 5. Contractor risks. 6. Suspension. 7. Escrowed pricing documents. 8. Assignment. 9. Traffic Control

	10. Project Management 11. Regulatory Approvals 12. Maintenance of Records 13. CPM Scheduling 14. Substantial Completion description 15. Acceptance of parts of phases 16. Contractor’s right to terminate 17. Financing, Tax District description

Exhibit D

Federal Requirements

1. **Fly America**:

The Contractor agrees to comply with 49 U.S.C. 40118 (the “Fly America” Act) in accordance with the General Services Administration’s regulations at 41 CFR Part 301-10, which provide that recipients and sub-recipients of Federal funds and their contractors are required to use U.S. Flag air carriers for U.S. Government-financed international air travel and transportation of their personal effects or property, to the extent such service is available, unless travel by foreign air carrier is a matter of necessity, as defined by the Fly America Act. The Contractor shall submit, if a foreign air carrier was used, an appropriate certification or memorandum adequately explaining why service by a U.S. flag air carrier was not available or why it was necessary to use a foreign air carrier and shall, in any event, provide a certificate of compliance with the Fly America requirements. The Contractor agrees to include the requirements of this section in all subcontracts that may involve international air transportation.

2. **Cargo Preference Requirements**:

a. Pursuant to Pub. L. 664 (46 U.S.C. 1241(b):

"Cargo Preference - Use of United States-Flag Vessels

The Contractor agrees:

(1) To utilize privately owned United States-flag commercial vessels to ship at least 50 percent of the gross tonnage (computed separately for dry bulk carriers, dry cargo liners and tankers) involved, whenever shipping any equipment, materials or commodities pursuant to this Contract, to the extent such vessels are available at fair and reasonable rates for United States-flag commercial vessels.

(2) To furnish within 20 working days following the date of loading for shipments originating within the United States, or within 30 working days following the date of loading for shipments originating outside the United States, a legible copy of a rated “on-board” commercial ocean bill-of-lading in English for each shipment of cargo described in paragraph (1) above to the Grantee (through the prime Contractor in the case of a subcontractor’s bill-of-lading) and to the Division of National Cargo, Office of Market Development,

Maritime Administration, Washington, D.C. 20230 and to the Grantee, marked with appropriate identification of the Project.

(3) To insert the substance of the provisions of this Article in all subcontracts issued pursuant to this Contract."

3. Seismic Safety Requirements:

The Contractor agrees that any new building or addition to an existing building will be designed and constructed in accordance with the standards for Seismic Safety required in Department of Transportation Seismic Safety Regulations 49 CFR Part 41 and will certify to compliance to the extent required by the regulation. The Contractor also agrees to ensure that all work performed under this contract including work performed by a subcontractor is in compliance with the standards required by the Seismic Safety Regulations and the certification of compliance issued on the project.

4. Energy Conservation Requirements:

The Contractor agrees to comply with mandatory standards and policies relating to energy efficiency which are contained in the state energy conservation plan issued in compliance with the Energy Policy and Conservation Act.

5. Clean Water Requirements and Clean Air

Certification:

a. **Clean Air** (The Clean Air requirements apply to all contracts and subcontracts exceeding $100,000, including indefinite quantities where the amount is expected to exceed $100,000 in any year). The Contractor agrees to comply with all applicable standards, orders or regulations issued pursuant to the Clean Air Act, as amended, 42 U.S.C. §§ 7401 et seq. The Contractor agrees to report each violation to the Department and understands and agrees that the Department will, in turn, report each violation as required to assure notification to FTA and the appropriate EPA Regional Office.

b. **Clean Water** (The Clean Water requirements apply to each contract and subcontract which exceeds $100,000). The Contractor agrees to comply with all applicable standards, orders or regulations issued pursuant to the Federal Water Pollution Control Act, as amended, 33 U.S.C. 1251 et seq. The Contractor agrees to report each violation to the Department and understands and agrees that the Department will, in turn, report each violation as required to assure notification to FTA and the appropriate EPA Regional Office.

c. The Contractor also agrees to include the above clean air and clean water requirements in each subcontract exceeding $100,000 financed in whole or in part with Federal assistance provided by FTA.

6. Lobbying

Certification:

CERTIFICATION FOR CONTRACTS, GRANTS, LOANS AND COOPERATIVE AGREEMENTS(07/03)

The undersigned certifies, to the best of his or her knowledge and belief, that:

(1) No Federal appropriated funds have been paid or will be paid, by or on behalf of the undersigned, to any person for influencing or attempting to influence an officer or employee of an agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with the awarding of any Federal contract, the making of any Federal grant, the making of any Federal loan, the entering into of any cooperative agreement, and the extension, continuation, renewal, amendment, or modification of any Federal contract, grant, loan or cooperative agreement.

(2) If any funds other than Federal appropriated funds have been paid or will be paid to any person for making lobbying contacts to an officer or employee of any agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with this Federal contract, grant, loan or cooperative agreement, the undersigned shall complete and submit Standard Form-LLL, "Disclosure Form to Report Lobbying," in accordance with its instructions.

(3) The undersigned shall require that the language of this certification be included in the award documents for all subawards at all tiers (including subcontracts, subgrants, and contracts under grants, loans, and cooperative agreements) and that all subrecipients shall certify and disclose accordingly.

This certification is a material representation of fact upon which reliance was placed when this transaction was made or entered into. Submission of this certification is a prerequisite for making or entering into this transaction imposed by 31 U.S.C. § 1352 (as amended by the Lobbying Disclosure Act of 1995). Any person who fails to file the required certification shall be subject to a civil penalty of not less than $10,000 and not more than $100,000 for each such failure.

The Contractor, _______________, certifies or affirms the truthfulness and accuracy of each statement of its certification and disclosure, if any. In addition, the Contractor understands and agrees that the provisions of 31 U.S.C. A 3801, *et seq.,* apply to this certification and disclosure, if any.

_________________________ Signature of Contractor's Authorized Official

_________________________ Name and Title of Contractor's Authorized Official

_________________________ Date

7. **Access to Records and Reports:**

a. The Contractor agrees to permit the U.S. Secretary of Transportation, the Comptroller General of the United States, and, to the extent appropriate, the State, or their duly authorized representatives, to inspect all Project work, materials, payrolls, and other data, and to audit the books, records, and accounts of the Contractor, pertaining to the Project.

b. The Contractor agrees to permit any of the foregoing parties to reproduce by any means whatsoever or to copy excerpts and transcriptions as reasonably needed.

c. The Contractor agrees to maintain all books, records, accounts and reports required under this contract for a period of not less than three years after the date of termination or expiration of this contract, except in the event of litigation or settlement of claims arising from the performance of this contract, in which case Contractor agrees to maintain same until the Department, the FTA Administrator, the Comptroller General, or any of their duly authorized representatives, have disposed of all such litigation, appeals, claims or exceptions related thereto. Reference 49 CFR 18.39(i)(11).

d. The Contractor agrees to include this clause in each subcontract awarded for work performed under this Contract. It is further agreed that the clause shall not be modified, except to identify the subcontractor who will be subject to its provisions.

8. **Federal Changes:**

a. Contractor shall at all times comply with all applicable FTA regulations, policies, procedures and directives, including without limitation those listed directly or by reference in the Agreement (Form FTA MA (9) dated October, 2002) between the Department and FTA, as they may be amended or promulgated from time to time during the term of this contract. Contractor's failure to so comply shall constitute a material breach of this contract.

b. The Contractor agrees to include this clause in each subcontract financed in whole or in part with Federal assistance provided by FTA. It is further agreed that the clause shall not be modified, except to identify the subcontractor who will be subject to its provisions.

9. Clean Air: *See 5 above.*

10. Recycled Products:

RECOVERED MATERIALS -

The contractor agrees to comply with all the requirements of Section 6002 of the Resource Conservation and Recovery Act (RCRA), as amended (42 U.S.C. 6962), including but not limited to the regulatory provisions of 40 CFR Part 247, and Executive Order 12873, as they apply to the procurement of the items designated in Subpart B of 40 CFR Part 247.

11. No Government Obligation to Third Parties:

(1) The Department and Contractor acknowledge and agree that, notwithstanding any concurrence by the Federal Government in or approval of the solicitation or award of the underlying contract, absent the express written consent by the Federal Government, the Federal Government is not a party to this contract and shall not be subject to any obligations or liabilities to the Department, Contractor, or any other party (whether or not a party to that contract) pertaining to any matter resulting from the underlying contract.

(2) The Contractor agrees to include the above clause in each subcontract financed in whole or in part with Federal assistance provided by FTA. It is further agreed that the clause shall not be modified, except to identify the subcontractor who will be subject to its provisions.

12. Program Fraud and False or Fraudulent Statements and Related Acts:

(1) The Contractor acknowledges that the provisions of the Program Fraud Civil Remedies Act of 1986, as amended, 31 U.S.C. § § 3801 et seq. and U.S. DOT regulations, "Program Fraud Civil Remedies," 49 C.F.R. Part 31, apply to its actions pertaining to this Project. Upon execution of the underlying contract, the Contractor certifies or affirms the truthfulness and accuracy of any statement it has made, it makes, it may make, or causes to be made, pertaining to the underlying contract or the FTA assisted project for which this contract work is being performed. In addition to other penalties that may be applicable, the Contractor further acknowledges that if it makes, or causes to be made, a false, fictitious, or fraudulent claim, statement, submission, or certification, the Federal Government reserves the right to impose the penalties of the Program Fraud Civil Remedies Act of 1986 on the Contractor to the extent the Federal Government deems appropriate.

(2) The Contractor also acknowledges that if it makes, or causes to be made, a false, fictitious, or fraudulent claim, statement, submission, or certification to the Federal Government under a contract connected with a project that is financed in whole or in part with Federal assistance originally awarded by FTA under the authority of 49 U.S.C. § 5307, the Government reserves the right to impose the penalties of 18 U.S.C. § 1001 and 49 U.S.C. § 5307(n)(1) on the Contractor, to the extent the Federal Government deems appropriate.

(3) The Contractor agrees to include the above two clauses in each subcontract financed in whole or in part with Federal assistance provided by FTA. It is further agreed that the clauses shall not be modified, except to identify the subcontractor who will be subject to the provisions.

13. **Debarment and Suspension.** The Contractor agrees to comply, and assures the compliance of each subcontractor at any tier, with Executive Orders Nos. 12549 and 12689, "Debarment and Suspension," 31 U.S.C. § 6101 note, and U.S. DOT regulations, "Governmentwide Debarment and Suspension (Nonprocurement)," within 49 C.F.R. Part 29.

14. **Privacy Act**:

CONTRACTS INVOLVING FEDERAL PRIVACY ACT REQUIREMENTS -

The following requirements apply to the Contractor and its employees that administer any system of records on behalf of the Federal Government under any contract:

(1) The Contractor agrees to comply with, and assures the compliance of its employees with, the information restrictions and other applicable requirements of the Privacy Act of 1974, 5 U.S.C. § 552a. Among other things, the Contractor agrees to obtain the express consent of the Federal Government before the

Contractor or its employees operate a system of records on behalf of the Federal Government. The Contractor understands that the requirements of the Privacy Act, including the civil and criminal penalties for violation of that Act, apply to those individuals involved, and that failure to comply with the terms of the Privacy Act may result in termination of the underlying contract.

(2) The Contractor also agrees to include these requirements in each subcontract to administer any system of records on behalf of the Federal Government financed in whole or in part with Federal assistance provided by FTA.

15. Civil Rights Requirements:

CIVIL RIGHTS (Revised October 20, 2000)

a. Nondiscrimination: In accordance with Title VI of the Civil Rights Act, as amended, 42 U.S.C. §2000d, section 303 of the Age Discrimination Act of 1975, as amended, 42 U.S.C. §6102, section 202 of the Americans with Disabilities Act of 1990, 42 U.S.C. §12132, and Federal transit law at 49 U.S.C. §5332, the Contractor agrees that it will not discriminate against any employee or applicant for employment because of race, color, creed, national origin, sex, age, or disability. In addition, the Contractor agrees to comply with applicable Federal implementing regulations and other implementing requirements that FTA may issue.

b. Equal Employment Opportunity: The following equal employment opportunity requirements apply to this contract:

(1) Race, Color, Creed, National Origin, Sex: In accordance with Title VII of the Civil Rights Act, as amended, 42 U.S.C. §2000e, and Federal transit laws at 49 U.S.C. §5332, the Contractor agrees to comply with all applicable equal opportunity requirements of U. S. Department of Labor (U.S. DOL) regulations, "Office of Federal Contract Compliance Programs, Equal Employment Opportunity, Department of Labor, " 41 C.F.R. Parts 60 et seq., (which implement Executive Order No. 11246, "Equal Employment Opportunity," as amended by Executive Order No. 11375, "Amending Executive Order 11246 Relating to Equal Employment Opportunity," 42 U.S.C. § 2000e note), and with any applicable Federal statutes, executive orders, regulations, and Federal policies that may in the future affect construction activities undertaken in the course of the Contract. The Contractor agrees to take affirmative action to ensure that applicants are employed, and that employees are treated during employment without regard to their race, color, creed, national origin, sex or age. Such action shall include, but not be limited to, the following: employment, upgrading, demotion or transfer, recruitment or recruitment advertising, layoff or termination; rates of pay or other forms of compensation; and selection for training, including apprenticeship. In addition, the Contractor agrees to comply with any implementing requirements FTA may issue.

(2) Age: In accordance with Section 4 of the Age Discrimination in Employment Act of 1967, as amended, 29 U.S.C. §§ 623 and Federal transit law at 49 U.S.C. §5332, the Contractor agrees to refrain from discrimination against present and prospective employees for reason of age. In addition, the Contractor agrees to comply with any implementing requirements FTA may issue.

(3) Disabilities: In accordance with section 102 of the Americans with Disabilities Act, as amended, 42 U.S.C. §12112, the Contractor agrees that it will comply with the requirements of U. S. Equal Employment Opportunity Commission, “Regulations to Implement the Equal Employment Provisions of the Americans with Disabilities Act,” 29 C.F.R. Part 1630, pertaining to employment of persons with disabilities. In addition, the Contractor agrees to comply with any implementing requirements FTA may issue.

c. The Contractor also agrees to include these requirements in each subcontract financed in whole or in part with Federal assistance provided by FTA, modified only if necessary to identify the affected parties.

16. Patent Rights.

a. General. If any invention, improvement, or discovery by the Recipient or any of its third party contractors or subrecipients at any tier of the Project is conceived or first actually reduced to practice in the course of or under the Project, and that invention, improvement, or discovery is patentable under the laws of the United States of America or any foreign country, the Recipient agrees to notify FTA immediately and provide a detailed report in a format satisfactory to FTA.

b. Federal Rights. The Recipient agrees that its rights and responsibilities, and those of each third party contractor and each subrecipient at any tier of the Project, pertaining to that invention, improvement, or discovery will be determined in accordance with applicable Federal laws and regulations, including any waiver thereof. Absent a determination in writing to the contrary by the Federal Government, the Recipient agrees to transmit to FTA those rights due the Federal Government in any invention, improvement, or discovery resulting from that third party contract or subcontract as specified in U.S. Department of Commerce regulations, "Rights to Inventions Made by Nonprofit Organizations and Small Business Firms Under Government Grants, Contracts and Cooperative Agreements," 37 C.F.R. Part 401 (implementing 35 U.S.C. §§ 200 *et seq*.), irrespective of the status of the Recipient, subrecipient, or third party contractor at any tier of the Project (*i.e.*, a large business, small business, State government or State instrumentality, local government, nonprofit organization, institution of higher education, individual, *etc*.)

17. Rights in Data and Copyrights.

a. Definition. The term "subject data" used in this Section means recorded information, whether or not copyrighted, that is delivered or specified to be delivered under the Grant Agreement or Cooperative Agreement. Examples include, but are not limited to: computer software, standards, specifications, engineering drawings and associated lists, process sheets, manuals, technical reports, catalog item identifications, and related information. "Subject data" does not include financial reports, cost analyses, or similar information used for Project administration.

b. Federal Restrictions. The following restrictions apply to all subject data first produced in the performance of the Grant Agreement or Cooperative Agreement:

(1) Except for its own internal use, the Recipient may not publish or reproduce subject data in whole or in part, or in any manner or form, nor may the Recipient authorize others to do so without the written consent of the Federal Government, until such time as the Federal Government may have either released or approved the release of such data to the public.

(2) The restriction on publication of Subsubsection b(1) above, however, does not apply to an Agreement with an institution of higher learning.

c. Federal Rights in Data and Copyrights. The Recipient agrees to provide to the Federal Government a royalty-free, non-exclusive and irrevocable license to reproduce, publish, or otherwise use, and to authorize others to use, for Federal Government purposes the "subject data" described in Subsections c(1) and c(2) below. As used herein, "for Federal Government purposes," means use only for the direct purposes of the Federal Government. Without the copyright owner's consent, the Federal Government may not provide or otherwise extend to other parties the Federal Government’s license to:

(1) Any subject data developed under the Grant Agreement or Cooperative Agreement, or under a third party contract or subagreement financed by the Grant Agreement or Cooperative Agreement, whether or not a copyright has been obtained; and

(2) Any rights of copyright to which a Recipient, subrecipient, or a third party contractor purchases ownership with Federal assistance.

d. Special Federal Rights in Data for Research, Development, Demonstration, and Special Studies (Planning) Projects. In general, FTA's purpose in providing financial assistance for a special studies (planning), research, development, or demonstration Project is to increase transportation knowledge, rather than limit the benefits of the Project to participants in the Project. Therefore, unless FTA determines otherwise, the Recipient of financial assistance to support a research, development, demonstration, or a special studies (planning) Project agrees that, in addition to the rights in data and copyrights of subsection c above, FTA may make available to any FTA recipient, subrecipient, third party contractor, or third party subcontractor, either FTA's license in the copyright to the subject data or a copy of the subject data. If the Project is not completed for any reason whatsoever, all data developed under the Project shall become subject data as defined in Subsection a above and shall be delivered as the Federal Government may direct. This Subsection d, however, does not apply to adaptations of automatic data processing equipment or programs for the Recipient's use when the costs thereof are financed with Federal funds for capital Projects.

e. Hold Harmless. Except as prohibited or otherwise limited by State law, upon request by the Federal Government, the Recipient agrees to indemnify, save, and hold harmless the Federal Government and its officers, agents, and employees acting within the scope of their official duties against any liability, including costs and expenses, resulting from any willful or intentional violation by the Recipient of proprietary rights, copyrights, or right of privacy, arising out of the publication, translation, reproduction, delivery, use, or disposition of any data furnished under the Project. The Recipient shall not be required to indemnify the Federal Government for any such liability caused by the wrongful acts of Federal employees or agents.

f. Restrictions on Access to Patent Rights. Nothing in this Section on Rights in Data and Copyright pertaining to rights in data shall imply a license to the Federal Government under any patent or be construed to affect the scope of any license or other right otherwise granted to the Federal Government under any patent.

g. Data Developed Without Federal Funding or Support. In connection with the Project, the Recipient may find it necessary to provide data developed without any Federal funding or support to the Federal Government. The requirements of Subsections b, c, and d above do not apply to data developed without Federal funding or support, even though that data may have been used in connection with the Project. Nevertheless, the Recipient understands and agrees that the Federal Government will not be able to protect data from unauthorized disclosure unless that data is clearly marked "Proprietary" or "Confidential."

h. Statutory Requirements to Release Data. To the extent required by U.S. DOT regulations, "Uniform Administrative Requirements for Grants and Agreements with Institutions of Higher Education, Hospitals, and Other Non-Profit Organizations," at 49 C.F.R. § 19.36(d), or by subsequent Federal laws or regulations, the Recipient understands and agrees that the data and information it submits to the Federal Government may be required to be released in accordance with the provisions of the Freedom of Information Act (or another Federal statute providing access to such records).

18. Environmental Requirements.

The Contractor recognizes that many Federal and State laws imposing environmental and resource conservation requirements may apply to the Project. Some, but not all, of the major Federal laws that may affect the Project include: the National Environmental Policy Act of 1969, as amended, 42 U.S.C. §§ 4321 *et seq.*; the Clean Air Act, as amended, 42 U.S.C. §§ 7401 *et seq*. and scattered sections of 29 U.S.C.; the Federal Water Pollution Control Act, as amended, 33 U.S.C. §§ 1251 *et seq*.; the Resource Conservation and Recovery Act, as amended, 42 U.S.C. §§ 6901 *et seq*.; and the Comprehensive Environmental Response, Compensation, and Liability Act, as amended, 42 U.S.C. §§ 9601 *et seq*. The Contractor also recognizes that U.S. EPA, FHWA and other Federal agencies have issued, and in the future are expected to issue, regulations, guidelines, standards, orders, directives, or other requirements that may affect the Project. Thus, the Contractor agrees to comply, and assures the compliance of each of its subcontractors, with any such Federal requirements as the Federal Government may now or in the future promulgate. Listed below are environmental requirements of particular concern to FTA and the Contractor. The Contractor agrees that those laws and regulations may not constitute the Contractor's entire obligation to meet all Federal environmental and resource conservation requirements.

a. Environmental Protection. The Contractor agrees to comply with all applicable requirements of the National Environmental Policy Act of 1969, as amended, 42 U.S.C. §§ 4321 *et seq*., Executive Order No. 11514, as amended, "Protection and Enhancement of Environmental Quality," 42 U.S.C. § 4321 note; FTA statutory requirements at 49 U.S.C. § 5324(b); U.S. Council on Environmental Quality regulations imposing requirements for compliance with the National Environmental Policy Act of 1969, as amended, 40 C.F.R. Part 1500 *et seq.*; joint FHWA/FTA regulations, "Environmental Impact and Related Procedures," 23 C.F.R. Part 771 and 49 C.F.R. Part 622.

b. Air Quality. The Contractor agrees to comply with all applicable regulations, standards, orders, and requirements implementing the Clean Air Act, as amended, 42 U.S.C. §§ 7401 *et seq.* In addition:

(1) The Contractor agrees to comply with the applicable requirements of the U.S. EPA regulations, "Conformity to State or Federal Implementation Plans of Transportation Plans, Programs, and Projects Developed, Funded or Approved Under Title 23 U.S.C. or the Federal Transit Act," 40 C.F.R. Part 51, Subpart T; and "Determining Conformity of Federal Actions to State or Federal Implementation Plans," 40 C.F.R. Part 93. To support the requisite air quality conformity finding for the Project, the Contractor agrees to implement each air quality mitigation or control measure incorporated in the Project. The Contractor further agrees that any Project identified in an applicable State Implementation Plan as a Transportation Control Measure will be wholly consistent with the design concept and scope of the Project described in the State Implementation Plan.

(2) U.S. EPA also imposes requirements implementing the Clean Air Act, as amended, that may apply to transit operators, particularly operators of large transit bus fleets. Accordingly, the Contractor agrees to comply with the following U.S. EPA regulations to the extent they are applicable to the Project: "Control of Air Pollution from Motor Vehicles and Motor Vehicle Engines," 40 C.F.R. Part 85;

"Control of Air Pollution from New and In-Use Motor Vehicles and New and In-Use Motor Vehicle Engines: Certification and Test Procedures," 40 C.F.R. Part 86; and "Fuel Economy of Motor Vehicles," 40 C.F.R. Part 600.

(3) The Contractor agrees to comply with the notification of violating facility requirements of Executive Order No. 11738, "Administration of the Clean Air Act and the Federal Water Pollution Control Act with Respect to Federal Contracts, Grants, or Loans," 42 U.S.C. § 7606 note.

c. Clean Water. The Contractor agrees to comply with all applicable standards, orders, or regulations issued pursuant to the Federal Water Pollution Control Act, as amended, 33 U.S.C. §§ 1251 *et seq.* In addition:

(1) The Contractor agrees to protect underground sources of drinking water in accordance with the provisions of the Safe Drinking Water Act of 1974, as amended, 42 U.S.C. §§ 300f *et seq*.

(2) The Contractor agrees to comply with the notification of violating facility requirements of Executive Order No. 11738, "Administration of the Clean Air Act and the Federal Water Pollution Control Act with Respect to Federal Contracts, Grants, or Loans," 42 U.S.C. § 7606 note.

d. Use of Public Lands. The Contractor agrees that it will not use in its Project any publicly owned land from a park, recreation area, or wildlife or waterfowl refuge of national, State, or local significance as determined by the Federal, State, or local officials having jurisdiction thereof, and will not use in its Project any land from a historic site of national, State, or local significance unless the Federal Government makes the findings required by 49 U.S.C. § 303.

e. Wild and Scenic Rivers. The Contractor agrees to comply with the Wild and Scenic Rivers Act of 1968, as amended, 16 U.S.C. §§ 1271 *et seq*. relating to protecting components of the national wild and scenic rivers system.

f. Coastal Zone Management. The Contractor agrees to assure Project consistency with the approved State management program developed under the Coastal Zone Management Act of 1972, as amended, 16 U.S.C. §§ 1451 *et seq*.

g. Wetlands. The Contractor agrees to comply with the protections for wetlands in accordance with Executive Order No. 11990, as amended, "Protection of Wetlands," 42 U.S.C. § 4321 note.

h. Floodplains. The Contractor agrees to comply with the flood hazards protections in floodplains in accordance with Executive Order No. 11988, as amended, "Floodplain Management" 42 U.S.C. § 4321 note.

i. Endangered Species. The Contractor agrees to comply with the protections for endangered species of the Endangered Species Act of 1973, as amended, 16 U.S.C. §§ 1531 *et seq*.

j. Historic Preservation. The Contractor agrees to foster compliance with the Federal historic and archaeological preservation requirements of section 106 of the National Historic Preservation Act, as amended, 16 U.S.C. § 470f; Executive Order No. 11593, "Protection and Enhancement of the Cultural Environment," 16 U.S.C. § 470 note; and the Archaeological and Historic Preservation Act of 1974, as amended, 16 U.S.C. §§ 469a *et seq.* as follows:

(1) In accordance with U.S. Advisory Council on Historic Preservation regulations, "Protection of Historic and Cultural Properties," 36 C.F.R. Part 800, the Contractor agrees to consult with the State Historic Preservation Officer concerning investigations to identify properties and resources included in or eligible for inclusion in the National Register of Historic Places that may be affected by the Project, and agrees to notify FTA and the Department of any affected properties.

(2) The Contractor agrees to comply with all Federal requirements to avoid or mitigate adverse effects on those historic properties.

k. Environmental Justice. The Contractor agrees to comply with the policies of Executive Order No. 12898, "Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations," 42 U.S.C. § 4321 note.

l. Mitigation of Adverse Environmental Effects. Should the Proposed project cause or result in adverse environmental effects, the Contractor agrees to take all reasonable measures to minimize those adverse effects, as required by 49 U.S.C. § 5324(b), and other applicable Federal laws and regulations, including joint FHWA/FTA regulations, "Environmental Impact and Related Procedures," 23 C.F.R. Part 771 and 49 C.F.R. Part 622. The Contractor agrees to comply with all environmental mitigation measures identified as commitments in applicable environmental documents (*i.e.*, environmental assessments, environmental impact statements, memoranda of agreement, and documents required by 49 U.S.C. § 303) and with any conditions imposed by the Federal Government in a finding of no significant impact or record of decision. The Contractor agrees that those mitigation measures are incorporated by reference and made part of the Grant Agreement or Cooperative Agreement. The Contractor also agrees that any deferred mitigation measures will be incorporated by reference and made part of the Grant Agreement or Cooperative Agreement as soon as agreement with the Federal Government is reached. The Contractor understands and agrees that those mitigation measures agreed upon may not be modified or withdrawn without the express written approval of the Federal Government.

19. Seat Belt Use: In accordance with Executive Order No. 13043, "Increasing Seat Belt Use in the United States," 23 U.S.C. § 402 note, the Contractor is encouraged to adopt on-the-job seat belt use policies and programs for its employees that operate company-owned, rented, or personally-operated vehicles and include this provision in its subcontracts.

20. **Incorporation of Federal Transit Administration (FTA) Terms**:

a. The preceding provisions include, in part, certain Standard Terms and Conditions required by DOT, whether or not expressly set forth in the preceding contract provisions. All contractual provisions required by DOT, as set forth in FTA Circular 4220.1E, dated June 19, 2003, as amended or revised by FTA, are hereby incorporated by reference. Anything to the contrary herein notwithstanding, all FTA mandated terms shall be deemed to control in the event of a conflict with other provisions contained in this Agreement. The Contractor shall not perform any act, fail to perform any act, or refuse to comply with any Authority requests which would cause the Department to be in violation of the FTA terms and conditions.

b. The Contractor agrees to include this clause in each subcontract financed in whole or in part with Federal assistance provided by FTA. It is further agreed that the clause shall not be modified, except to identify the subcontractor who will be subject to the provisions.

EXHIBIT E-1

COMPREHENSIVE AGREEMENT GUARANTY

This Comprehensive Agreement Guaranty ("Guaranty") is made as of _______ ___, 2004, by ________________ ("Guarantor") to the Virginia Department of Rail and Public Transportation, a department of the Commonwealth of Virginia (the "Department"), with respect to the obligations of Dulles Transit Partners, LLC, a Virginia limited liability company ("DTP"), under that certain Comprehensive Agreement dated as of ________ ___, 200__ (as amended, altered, varied or supplemented, the "Comprehensive Agreement"), by and between the Department and DTP, to complete the preliminary engineering work and the development work for the Dulles Corridor Rapid Transit Project. The Comprehensive Agreement is hereby incorporated by reference herein. As a condition to entering into the Comprehensive Agreement, the Department has required Guarantor to execute and deliver this Guaranty. DTP is a limited liability company, and Guarantor is the parent of _________ which is a member of DTP. Guarantor acknowledges that financial and direct benefits will accrue to Guarantor by virtue of entering into this Guaranty and that such benefits constitute adequate consideration therefor.

The parties hereto acknowledge and agree that this Guaranty is enforceable only as to the Preliminary Engineering Work and the Development Work (as those terms are defined in the Comprehensive Agreement).

ARTICLE I

GUARANTY

Section 1.01 Guaranty. Guarantor hereby guarantees to the Department, absolutely, unconditionally and irrevocably, that each and every payment and performance obligation and other liability of DTP now or hereafter arising under the Comprehensive Agreement, including but not limited to all obligations and liabilities of DTP under any and all representations and warranties made or given by DTP therein, under any and all liquidated or stipulated damage provisions of the Comprehensive Agreement and under any and all indemnities given by DTP therein (collectively, the "Guaranteed Obligations") will be promptly paid and satisfied in full when due and without offset, and performed and completed when required.

Section 1.02 Obligations. Except as provided in Section 4.07 below, the obligations of Guarantor hereunder are absolute and unconditional and independent of the Guaranteed Obligations of DTP and shall remain in full force and effect until all the Guaranteed Obligations have been paid, performed and completed in full, irrespective of any assignment, amendment, modification or termination of the Comprehensive Agreement.

Section 1.03 **No Exoneration**. The obligations of Guarantor hereunder shall not be released, discharged, exonerated or impaired in any way by reason of:

(a) any failure of the Department to retain or preserve any rights against any person;

(b) the lack of prior enforcement by the Department of any rights against any person and the lack of exhaustion of any bond, letter of credit or other security held by the Department;

(c) the lack of authority or standing of DTP or the dissolution of Guarantor, DTP, or the Department;

(d) with or without notice to Guarantor, the amendment, alteration, acceleration, extension, waiver, retirement, suspension, surrender, compromise, settlement, release, revocation or termination of, or failure to assert, any portion of the Guaranteed Obligations, the Comprehensive Agreement, any rights or remedies of the Department (including rights of offset) against DTP, or any bond, letter of credit, other guaranty, instrument, document, collateral security or other property given or available to the Department to secure all or any part of the Guaranteed Obligations, provided that Guarantor shall have available to it the same defenses, if any, to performance of the Guaranteed Obligations that may be available to DTP based on any such amendment, alteration, acceleration, extension, waiver, retirement, suspension, surrender, compromise, settlement, release, revocation or termination or failure to assert voluntarily made by the Department, except defenses available to DTP under any federal or state law respecting bankruptcy, arrangement, reorganization or similar relief of debtors;

(e) the extension of the time for payment of any amount owing or payable under the Comprehensive Agreement or of the time for performance or completion of any Guaranteed Obligation;

(f) the taking or the omission of any of the actions referred to in the Comprehensive Agreement or of any actions under this Guaranty;

(g) the existence now or hereafter of any other guaranty or endorsement by the grantor or anyone else of all or any portion of the Guaranteed Obligations;

(h) the acceptance, release, exchange or subordination of additional or substituted security for all or any portion of the Guaranteed Obligations;

(i) the taking of any action or the failure to take any action which would constitute a legal or equitable defense, release or discharge of a surety;

(j) any bankruptcy, arrangement, reorganization or similar proceeding for relief of debtors under federal or state law hereinafter initiated by or against DTP, any other guarantor of the Guaranteed Obligations or the Department;

(k) any full or partial payment or performance of any Guaranteed Obligation which is required to be returned as a result of or in connection with the insolvency, reorganization or bankruptcy of DTP or otherwise;

(l) the rejection of any contract in connection with the insolvency, reorganization or bankruptcy of DTP;

(m) an impairment of or limitation on damages due from DTP by operation or law in any insolvency, reorganization or bankruptcy proceeding by or against DTP;

(n) failure by the Department, to file or enforce a claim against the estate (either in administration, bankruptcy or other proceedings) of DTP; Guarantor or any other guarantor;

(o) any merger, consolidation or other reorganization to which DTP, the Department or Guarantor is a party;

(p) any sale or disposition of all or any portion of Guarantor's direct or indirect ownership in DTP, or any other event which results in discontinuation or interruption in the business relations of DTP with Guarantor;

(q) the lack of genuineness, validity, regularity or enforceability of any of the Guaranteed Obligations or the Comprehensive Agreement;

(r) the failure of the Department to assert any claim or demand, bring any action or exhaust its remedies against DTP or any security before proceeding against Guarantor hereunder; or

(s) termination of the Comprehensive Agreement by reason of DTP's default thereunder.

Section 1.04 Enforcement of Comprehensive Agreement and Guaranteed Obligations.

(a) Nothing contained herein shall prevent or limit the Department from pursuing any of its rights and remedies under the Comprehensive Agreement, or any provisions thereof. The Department may apply any moneys, property or security available to it in such manner and amounts and at such times to the payment or reduction or performance of any Guaranteed Obligation as the Department may elect, and may generally deal with DTP, the Guaranteed Obligations, such security and property as the Department may see fit. Notwithstanding the foregoing, Guarantor shall remain bound by this Guaranty.

(b) Subject to Section 4.07 below, Guarantor shall be obligated to undertake all curative action which may be agreed upon between the Department and DTP. If, following notice under Section 4.07 below, Guarantor does not use its best efforts to proceed promptly to effectuate such curative action within the directed time, or should no agreement on the curative action be reached with DTP within 14 days after the Department notifies DTP and Guarantor (under Section 4.07 below) of the need for curative action (or immediately, in the case of emergency conditions), the Department, without further notice to Guarantor, shall have the right to perform or have performed by third parties the necessary curative action, and the costs thereof shall be borne by Guarantor.

(c) The Department may bring and prosecute a separate action or actions against Guarantor to enforce its liabilities hereunder, regardless of whether any action is brought against DTP and regardless of whether any other person is joined in any such action or actions. Nothing shall prohibit the Department from exercising its rights against Guarantor, DTP, any other guarantor of the Guaranteed Obligations, a performance bond or other security, if any, which insures the payment of the Guaranteed Obligations, or any other person simultaneously, or any combination thereof jointly and/or severally.

ARTICLE II

REPRESENTATIONS AND WARRANTIES

Section 2.01 **Representations and Warranties.** Guarantor hereby represents and warrants that:

(a) Consents. DTP is a limited liability company, and _____________ is the parent of _____________, which is a member of DTP. Consent of DTP to any modification or amendment of the Comprehensive Agreement constitutes knowledge thereof and consent thereto by Guarantor;

(b) Organization and Existence. Guarantor is a corporation duly organized, validly existing and in good standing under the laws of its state of incorporation;

(c) Power and Authority. Guarantor has the full power and authority to execute, deliver and perform this Guaranty, and to own and lease its properties and to carry on its business as now conducted and as contemplated hereby;

(d) Authorization and Enforceability. This Guaranty has been duly authorized, executed and delivered by Guarantor and constitutes the legal, valid and binding obligation of Guarantor, enforceable against it in accordance with the terms hereof, subject as to enforceability of remedies to limitations imposed by bankruptcy, insolvency, reorganization, moratorium or other similar laws relating to or affecting the enforcement of creditors' rights generally, as applicable to Guarantor, and to general principles of equity;

(e) No Governmental Consents. No authorization, consent or approval of, notice to or filing with, any governmental authority is required for the execution, delivery and performance by Guarantor of this Guaranty:

(f) No Conflict or Breach. Neither the execution, delivery or performance by Guarantor of this Guaranty, nor compliance with the terms and provisions hereof, conflicts or will conflict with or will result in a breach or violation of any material terms, conditions, or provisions of any law, governmental rule or regulation or the charter documents, as amended, or bylaws, as amended, of Guarantor or any order, writ, injunction or decree of any court or governmental authority against Guarantor or by which it or any of its properties is bound, or any indenture, mortgage or contract or other agreement or instrument to which Guarantor is a party or by which it or any of its properties is bound, or constitutes or will constitute a default thereunder or will result in the imposition of any lien upon any of its properties;

(g) No Proceeding. There are no suits or proceedings pending, or, to the knowledge of Guarantor, threatened in any court or before any regulatory commission, board or other governmental administrative agency against Guarantor which could reasonably be expected to have a material adverse affect on the business or operations of Guarantor, financial or otherwise, or on its ability to fulfill its obligations hereunder; and

(h) Comprehensive Agreement. Guarantor is fully aware of and consents to the terms and conditions of the Comprehensive Agreement.

ARTICLE III

WAIVERS, SUBROGATION AND SUBORDINATION

Section 3.01 Waivers.

(a) Guarantor hereby unconditionally waives:

(i) notice of acceptance of this Guaranty or of the intention to act in reliance hereon and of reliance hereon;

(ii) notice of the incurring, contracting, amendment, alteration, acceleration, extension, waiver, retirement, suspension, surrender, compromise, settlement, release, revocation or termination of, or of the failure to assert, any Guaranteed Obligation or the Comprehensive Agreement;

(iii) demand on Guarantor in the event of default;

(iv) any invalidity of the Comprehensive Agreement due to lack of proper authorization of or a defect in execution thereof by DTP, its purported representatives or agents;

(v) demand for payment or performance, presentment, protest and notice of nonpayment or dishonor respecting any Guaranteed Obligation;

(vi) all other notices to which Guarantor might otherwise be entitled, except notice as set forth in Section 4.07 below;

(vii) any demand for payment hereunder;

(viii) the provisions of Sections 49-25 and 49-26 of the Code of Virginia of 1950, as amended; and

(ix) any duty on the part of the Department to disclose to Guarantor any facts the Department may now or hereafter know with regard to DTP.

(b) Guarantor also hereby waives any right to require, and the benefit of all laws now or hereafter in effect giving Guarantor the right to require, any prior enforcement as referred to in Section 1.03(b) above, and Guarantor agrees that any delay in enforcing or failure to enforce any such rights or in making demand on Guarantor for the performance of the obligations of Guarantor under this Guaranty shall not in any way affect the liability of Guarantor hereunder.

(c) Guarantor hereby waives, as against the Department and any person claiming under the Department, all rights and benefits which might accrue to Guarantor by reason of any bankruptcy, arrangement, reorganization or similar proceedings by or against DTP and agree that its obligations and liabilities hereunder shall not be affected by any modification, limitation or discharge of the obligations of DTP that may result from any such proceedings.

(d) Until DTP shall have fully and satisfactorily paid, performed, completed and discharged all the Guaranteed Obligations, Guarantor hereby agrees not to file, or solicit the filing by others of, any involuntary petition in bankruptcy against DTP.

Section 3.02 Subrogation. Until DTP shall have fully and satisfactorily paid, performed, completed and discharged all the Guaranteed Obligations, Guarantor shall not claim or enforce any right of subrogation, reimbursement or indemnity against DTP, or any other right or remedy which might otherwise arise on account of any payment made by Guarantor or any act or thing done by Guarantor on account of or in accordance with this Guaranty.

Section 3.03 Subordination.

(a) All existing or future indebtedness of DTP to Guarantor is subordinated to all of the Guaranteed Obligations. Whenever and for so long as DTP shall be in default in the performance or payment of any Guaranteed Obligation, no payments with respect to any such indebtedness shall be made by DTP to Guarantor without prior written notice to the Department.

(b) Guarantor shall file all claims against DTP in any bankruptcy or other proceedings in which the filing of claims is required or permitted by law, upon any obligation or indebtedness of DTP to such Guarantor, and shall have assigned to the Department all of such Guarantor's rights thereunder to the extent of outstanding and unsatisfied Guaranteed Obligations. If such Guarantor does not file any such claim, the Department is authorized as such Guarantor's attorney-in-fact to do so in such Guarantor's name; or in the Department's discretion, the Department is authorized to assign the claim to, and cause proof of claim to be filed in the name of, the Department or its nominee. In all such cases, whether in administration, bankruptcy, or otherwise, the person or persons authorized to pay such claim shall pay to the Department or its nominee, the full amount payable on the claim in the proceeding before making any payment to Guarantor, and to the full extent necessary for that purpose, Guarantor assigns to the Department all of its rights to any payments or distributions to which it otherwise would be entitled. If the amount so paid is in excess of the Guaranteed Obligations covered hereby, the Department shall pay the amount of the excess to the party determined by it to be entitled thereto.

ARTICLE IV

MISCELLANEOUS

Section 4.01 Not Used.

Section 4.02 Enforcement of Guaranty.

(a) The terms and provisions of this Guaranty shall be governed by and interpreted in accordance with the laws of the Commonwealth of Virginia applicable to contracts executed and to be performed within the Commonwealth of Virginia.

(b) No supplement, amendment, modification, waiver or termination of this Guaranty shall be binding unless executed in writing and duly signed by the Department. No waiver of any of the provisions of this Guaranty shall be deemed or shall constitute a waiver of any other provisions hereof whether or not similar, nor shall such waiver constitute a continuing waiver unless otherwise expressly provided. No failure on the part of Department to exercise, and no delay in exercising, any right hereunder shall operate as a waiver thereof, nor shall any single or partial exercise of any right hereunder preclude any other or further exercise of any other right.

(c) All disputes between the Department and Guarantor arising under or relating to this Guaranty or its breach shall be filed, heard and decided in the Circuit Court for the City of Richmond, Virginia, Division I, which shall have exclusive jurisdiction and venue. Guarantor hereby irrevocably waives, to the fullest extent it may effectively do so, the defense of an inconvenient forum to the maintenance of any action or proceedings in such court arising out of or relating to this Guaranty. Guarantor agrees that a final non-appealable judgment in any such action or proceeding shall be conclusive and may be enforced in other jurisdictions by suit on the judgment or in any other manner provided by law. Guarantor agrees and consents to service of process by delivery in the manner and to the address set forth in Section 4.03 below. Nothing in this section shall affect the right of the Department to serve legal process in any other manner permitted by law.

(d) The rights of the Department hereunder are cumulative and shall not be exhausted by any one or more exercises of said rights against Guarantor or other guarantors or by any number of successive actions until and unless all Guaranteed Obligations have been fully paid or performed.

(e) Guarantor shall pay to the Department all reasonable out-of-pocket legal fees and other reasonable out-of-pocket costs and expenses (including fees and costs on appeal) the Department incurs by reason of any permitted enforcement by the Department of its rights hereunder, provided that the Department is the prevailing party with respect to a substantial portion of its claim.

(f) THE PARTIES HEREBY KNOWINGLY, VOLUNTARILY, AND INTENTIONALLY WAIVE ANY RIGHTS THEY MAY HAVE TO A TRIAL BY JURY IN ANY LITIGATION OR CLAIM WHICH IS BASED ON, OR ARISES OUT OF, UNDER OR IN CONNECTION WITH, THIS GUARANTY OR THE TRANSACTIONS CONTEMPLATED BY THIS GUARANTY.

Section 4.03 Notices. All notices, demands or other communications under this Guaranty shall be in writing and shall be sent to the other party, at its address specified below (or such other address as a party may from time to time specify by notice given in accordance with this Guaranty), and shall be deemed to have been duly given when actually received by the addressee or when served:

(a) personally,

(b) by independent, reputable, overnight commercial courier,

(c) by facsimile transmission:

(i) where the transmitting party includes a cover sheet identifying the name, location and identity of the transmitting party, the phone number of the transmitting device, the date and time of transmission and the number of pages transmitted (including the cover page),

(ii) where the transmitting device or receiving device records verification of receipt and the date and time of transmission receipt and the phone number of the other device, and

(iii) where the facsimile transmission is immediately followed by service of the original of the subject item in the manner provided in subsections (a), (b) or (d), or

(d) by deposit in the United States mail, postage and fees fully prepaid, registered or certified mail, with return receipt requested, addressed as follows:

If to the Department:

Virginia Department of Rail and Public Transportation
1313 East Main Street, Suite 300
P.O. Box 590
Richmond, VA 23218-0590
Attn: Director
Fax: (804) 225-3664

with a copy to:

Richard L. Walton, Jr.
Senior Assistant Attorney General
900 E. Main Street
Richmond, VA 23219
Fax: (804) 786-9136

If to ______________________:

____

Fax: (_____)______ -____________

Section 4.04 Severability. If any provision of this Guaranty shall for any reason be held invalid or unenforceable, to the fullest extent permitted by law, such invalidity or unenforceability shall not affect any other provisions hereof, but this Guaranty shall be construed as if such invalid or unenforceable provision had never been contained herein.

Section 4.05 Assignment. Neither this Guaranty nor any of the rights, interest or obligations hereunder shall be assigned or delegated by Guarantor without the prior written consent of the Department. This Guaranty and all of the provisions hereof shall be binding upon Guarantor and its successors and permitted assigns and shall inure to the benefit of the Department and its respective successors and assigns.

Section 4.06 No Third Partv Beneficiaries. Nothing in this Guaranty shall entitle any person other than the Department and its respective successors and assigns to any claim, cause or action, remedy or right of any kind.

Section 4.07 Certain Rights, Duties, Obligations and Defenses. Notwithstanding Sections 1.02 and 1.03 above, Guarantor shall have all rights, duties, obligations and defenses available to DTP under the Comprehensive Agreement relating to waiver, surrender, compromise, settlement, release or termination voluntarily made by the Department, failure to give notice of default to DTP to the extent required by the Comprehensive Agreement; interpretation or performance of terms and conditions of the Comprehensive Agreement; or other defenses available to DTP under the Comprehensive Agreement except those expressly waived in this Guaranty and defenses available to DTP under any federal or state law respecting bankruptcy, arrangement, reorganization or similar relief of debtors. Action against Guarantor under this Guaranty shall be subject to no prior notice or demand except for 14 days' prior written notice to Guarantor setting forth the default or breach of Guaranteed Obligation on the part of DTP and demand for payment or performance of such Guaranteed Obligation, provided that immediate action after written notice may be required of Guarantor in the case of emergency conditions.

Section 4.08 Mergers, etc. Guarantor shall not, in a single transaction or through a series of related transactions, consolidate with or merge with or into any other person or sell, assign, convey, transfer, lease or otherwise dispose of any material portion of its properties and assets to any person or group of affiliated persons, unless:

(a) in case of a merger, Guarantor shall be the continuing corporation; or

(b) the person (if other than Guarantor) formed by such consolidation or into which Guarantor merges or the person (or group of affiliated persons) that acquires by sale, assignment conveyance, transfer, lease or other disposition a material portion of the properties and assets of Guarantor shall expressly agree to perform all of the obligations of Guarantor hereunder, as a joint and several obligor with Guarantor if Guarantor continues to exist after such transaction, by a writing in form and substance reasonably satisfactory to the Department.

Notwithstanding the agreement by any such person to perform the obligations of Guarantor hereunder, Guarantor shall not be released from its obligations hereunder.

Section 4.09 Survival. The obligations and liabilities of Guarantor hereunder shall survive termination of the Comprehensive Agreement or DTP's rights thereunder due to default by DTP thereunder.

Section 4.10 Headings. The Article and Section headings in this Guaranty are for convenience of reference only and shall not be deemed to alter or affect the meaning or interpretation of any provisions hereof.

Section 4.11 Counterparts. This Guaranty may be executed in one or more counterparts, all of which shall constitute one and the same instrument.

Section 4.12 Entire Agreement. This Guaranty constitutes the entire agreement of the parties hereto with respect to the subject matter hereof. Guarantor agrees to execute, have acknowledged and delivered to the Department such other and further instruments as may be reasonably required by Department to effectuate the intent and purpose hereof.

[Signatures On Next Page]

IN WITNESS WHEREOF, Guarantor has caused this Guaranty to be executed as of the day and year first above written by its duly authorized officers.

[GUARANTOR],

a ______________ corporation

By: ______________________
Name: ____________________
Title: _____________________

Date:____________________________________

Receipt of this Guaranty is hereby acknowledged and
accepted effective as of the ___ day of ___________, 2004

VIRGINIA DEPARTMENT OF RAIL AND PUBLIC TRANSPORTATION,
a department of the Commonwealth of Virginia

By:______________________________
Director

EXHIBIT F-1

PHASE 1 DEVELOPMENT SCOPE OF WORK

1 GENERAL

The Virginia Department of Rail and Public Transportation (DRPT) will conduct Preliminary Engineering for the Dulles Corridor Rapid Transit Project, the next phase of the Federal Transit Administration's project development process. Concurrent with the design and technical analyses being conducted under the separate Preliminary Engineering Scope of Work (Exhibit G-1), DRPT will conduct several Development activities needed to facilitate or advance the Project's implementation.

1.1 Purpose

This Scope of Work will serve as the basis for performance of Development activities to be provided by Dulles Transit Partners, LLC (DTP). Work to be performed will include professional, administrative, and other services necessary to provide the agreed level of support and prepare the specified deliverables.

This Scope of Work is primarily for Phase 1 of the Project. However, in cases where Development activities described herein can be performed more cost-effectively if they are completed at the same time for the entire Project, DTP may request authorization to perform these activities for both Project phases during the Phase 1 Development period. To the extent that specific Development activities can be completed discretely by phase, without incurring additional cost, DTP will undertake those activities applicable to Phase 2 during the Development period for Phase 2 pursuant to a separate Scope of Work to be negotiated at a future date and added to the Comprehensive Agreement by supplement.

1.2 Development Objectives

The Development activities described in this Scope of Work will support advancement of the Project toward final design and construction. Working in partnership with DRPT, DTP's Development team is focused on meeting the following objectives to facilitate execution of a Full Funding Grant Agreement and a design-build contract for the Project:

- Management of the Development Process with a Single Point of Accountability
- Support Development of a Sound Financial Plan
- Effective Communications with Stakeholders and Fostering Public Support
- Advancement of Right-of-Way Acquisition, Utility Relocation, and Permitting Activities
- Identification of Potentially Cost-Effective Design Modifications

1.3 Core, Incremental and Tasked Development Activities

The remainder of this Scope of Work provides a detailed description of each of the principal Development activities. Each of these activities includes professional services that will be performed as Core, Incremental or Tasked Work as described in Article 5.2 of the Comprehensive Agreement and summarized below:

> **Core Development Work** consists of ongoing, baseline activity required to complete the Development process and will commence upon issuance of a Notice to Proceed (NTP) for Development activities. This Core work will be performed on a cost reimbursable basis.
>
> **Incremental Development Work** consists of defined activities that will commence upon written approval of DRPT. Incremental work will be performed on a cost reimbursable basis.

Tasked Development Work consists of discrete activities that will be performed using a separate scope, schedule, and budget, and will commence upon DRPT issuance of individual task orders. Tasked work will be performed on a fixed price basis if applicable, but may be performed on a cost reimbursable basis if deemed appropriate by DRPT.

Each section of the Scope of Work includes a table that identifies the specific activities that will be performed on a Core, Incremental or Tasked basis. In addition, Exhibit F-2 includes a breakdown of the full budget for Development activities by these categories. The budget is based on a 20-month duration for Phase 1 Development activities.

1.4 Roles and Responsibilities

DTP will be primarily responsible for conducting all approved Development activities included in this Scope of Work, including scheduling of those activities, management of subconsultants, maintenance of Development-related records and files, preparation of all supporting materials and documents, and completion of all deliverables.

These Development activities will be performed under the direct management and oversight of DRPT. Where appropriate, the Washington Metropolitan Area Transit Authority (WMATA)—the Project's operator and ultimate owner—will support DRPT. Other governmental entities or agencies, including the Federal Transit Administration (FTA), Metropolitan Washington Airports Authority (MWAA), Virginia Department of Transportation (VDOT), Virginia Department of the Treasury, Office of the Attorney General, Fairfax County, and Loudoun County, may also have responsibilities during the Development phase. Management of Development activities will be conducted in accordance with the Project Management Plan and its definitions of responsibilities:

Responsibility	Definition
Approve	Authority to review and approve an action or deliverable
Manage	Direct day-to-day management
Participate	Active in daily functions
Perform	Conduct activity or take action
Prepare	Responsible for preparation of necessary documents
Provide	Delivery of required documents or equipment
Review	Examination not requiring approval
Submit	Packaging of required documents and submission to requesting organization
Support	Response to requested items and actions

1.5 Deliverables

Deliverables associated with Development activities included in this Scope of Work are specified in Sections 2 – 6 below.

1.6 Exclusions

Certain activities and costs are explicitly excluded from the scope of these Development services, including:

- All environmental remediation work related to hazardous materials or cultural resources.
- Permit fee payments.
- Preparation of cost estimates and/or plans for the operation and maintenance of any portion of the Project.
- Preparation of pricing and purchase terms for Metrorail vehicles and fare collection equipment.

- Preliminary Engineering activities, as specified in Exhibit G-1
- Amounts paid for property acquired through negotiation or condemnation, legal costs associated with condemnation proceedings, environmental remediation costs, and costs arising from the disposal of residue parcels.

2 PROJECT MANAGEMENT

DTP's management team will serve as the single point of accountability in managing and coordinating the entire Development process to meet the Project's schedule and budget. For the purposes of this Scope of Work, the term "Project Management" refers to management of DTP's own Development activities only, and does not include management of DRPT or other stakeholder activities. Certain Project Management activities related to Preliminary Engineering activities are described separately in Exhibit G-1.

The DTP management team will consist of a group of professionals working in a highly integrated environment to manage the Development activities. DRPT will conduct overall program management for the Project, and DTP will coordinate and work closely with DRPT and its Project Director and Deputy Project Director–Project Development to carefully align all DTP activities with DRPT's program initiatives. DTP's management team will participate in all Project partnering sessions.

2.1 Project Office

DTP will establish and maintain a project office in the Tysons Corner area for the duration of the Development activities. Upon agreement on terms, DTP will lease office space that will house DTP's development team, DRPT's project staff, WMATA project staff, other dedicated Commonwealth or agency personnel (if requested), and DTP's Preliminary Engineering activities. The office will be equipped with communications and information technology equipment and systems sufficient to support completion of the activities specified in the Development and Preliminary Engineering scopes of work.

2.2 Master Project Schedule

DTP will develop a master schedule that will be maintained throughout the project development process. This schedule will incorporate all Development, Preliminary Engineering, Design-Build implementation, and agency activities, indicate critical path issues and supporting activities, and include start dates, end dates, and current percent complete. All schedules will be developed in Primavera using the Critical Path Method.

The initial Master Project Schedule, detailing Development activities, Preliminary Engineering activities, and major milestones will be submitted for review and approval within 30 days of NTP for Development services. Within 120 days of NTP, a major update of the Master Project Schedule will be submitted to DRPT for approval. This update will include a Development activities schedule, a Preliminary Engineering activities schedule, a summary Design-Build Implementation schedule, and the agency schedule provided by DRPT. Prior to incorporating the Preliminary Engineering activities schedule or the Design-Build Implementation schedule into the Master Project Schedule, DTP will submit these to WMATA for review in accordance with the Preliminary Engineering Scope of Work. Subsequent updates to the Master Project Schedule will be provided to DRPT on a monthly basis.

2.3 Project Controls and Reporting

DTP will coordinate with DRPT to determine the type and scope of management plans and procedures that will be required to satisfy federal funding guidelines. DTP will prepare and present the appropriate plans to DRPT for review and approval. DTP will maintain a document control system for Development activities that is compliant with FTA requirements and compatible with the document control system used for Preliminary Engineering activities.

DTP will maintain a Master Project Budget (covering total program costs) and a Project Development Budget (covering DTP's Development scope and Preliminary Engineering activities). These budgets will be updated monthly during the development phase to reflect actual costs for prior periods and revised estimates of future costs and timing. DTP will provide Development cost controls and cost forecasting throughout the Development process.

2.4 Subcontracting

DTP will procure and contract with various consultants and advisors, including legal advisors, throughout the Development process, and will do so in a manner that meets Commonwealth and FTA requirements. After NTP for Development activities, DTP will prepare a subcontracting plan for review and approval by DRPT. Copies of executed subcontractor agreements will be available to DRPT.

DTP will develop and maintain a Disadvantaged Business Enterprise (DBE) compliance program. DTP will provide periodic reports on its DBE program. DTP will review and coordinate with other parties all commercial, financing, and technical agreements related to the Development process to maintain consistency, compatibility, and regulatory compliance. DTP will maintain records of all agreements and legal documents.

2.5 Accounting, Invoicing, and Records

DTP will maintain detailed accounting records of development activities and costs, including staff costs, subcontractor and consultant costs, office costs and expenses, and other direct costs. DTP will maintain its financial records in accordance with the Generally Accepted Accounting Principles. Accounting records and outside accounting firm audit reports of DTP costs will be made available to DRPT upon request.

DTP will perform integrated budgeting, invoicing, accounts receivable, accounts payable, and general ledger functions relative to Development and Preliminary Engineering activities. This will involve the use of an integrated project information system capable of tracking and reporting all budgets, costs, payments, DTP contributions, and DBE participation amounts for all tasks and all program participants. DTP will establish a Work Breakdown Structure (WBS) to track all costs at the task or activity level. This WBS will be used in all financial reports, invoices, and schedules prepared by DTP.

As Project development cost and contribution milestones are reached, DTP will prepare and submit cost summaries with backup details, as required by DRPT to request recovery of these contributions.

2.6 Quality Assurance and Quality Control

DTP will, within 30 days of NTP, provide a Quality Assurance/Quality Control (QA/QC) Plan for Development activities to DRPT for approval. The Development QA/QC Plan will include, but will not be limited to, the following:

- Qualifications of QA/QC personnel.
- Qualifications of key staff members responsible for Deliverables in each Development phase.
- Procedures for implementing QA/QC measures for each Development Deliverable.
- Procedures for documenting implementation of QA/QC program, deficiency reports, and follow-up/corrective actions.
- QA/QC program review schedules.

Prior to or at NTP, DTP will provide an interim QA/QC Plan for Development and Preliminary Engineering work performed prior to DRPT approval of the final QA/QC Plans for these activities. This interim QA/QC Plan will provide general procedures to meet DRPT's quality requirements in executing initial tasks or activities. Specific procedures and processes will be provided in the final QA/QC Plans. DRPT may elect to audit DTP's QA/QC program periodically. Audits may take place within the office of DTP or its subconsultants.

2.7 Project Management: Division of Responsibilities

The division of responsibilities for Project Management activities is summarized in Table 1.

Table 1 -- Project Management Responsibilities

Task	DRPT	WMATA	DTP
Project Office	Approve		Provide and Manage
Master Project Schedule	Approve		Prepare
Project Controls and Reporting			
DTP Management Plans and Procedures	Approve		Prepare
Monthly Status Report	Review		Prepare
Master Project Budget	Approve		Prepare
Project Development Budget	Approve		Prepare
Document Control Management	Approve		Perform
Subcontracting			
Subcontracting Plan	Approve		Prepare
Contract Administration			Perform
Maintain Legal Files			Perform
DBE Program Reports	Review		Prepare
Monthly Subcontractor Status Report	Review		Prepare
Accounting, Invoicing, and Records			
Development Cost Accounting	Review		Perform
Financial Accounting	Review		Perform
Annual Financial Audit	Review		Perform
Cost and Accounting Records	Review		Prepare
Monthly Invoices for Development Activities	Approve		Prepare
Quality Assurance/Quality Control			
Quality Assurance Plan for Development Activities	Approve		Prepare
QA/QC for Development Deliverables	Approve		Manage and Perform

2.8 Project Management: Deliverables

DTP deliverables associated with Project Management activities include:

- Project office in Tysons Corner area, with space, furnishings, and equipment for DRPT, DTP, and WMATA staff.
- Document control system for Development activities compliant with FTA guidelines and compatible with the system used for Preliminary Engineering activities
- Master Project budget
- Project Development budget
- Master Project Schedule
- Monthly Invoice for Development services, with necessary supporting documentation
- Monthly status reports, including:
  - Updated Master Project Schedule
  - Updated Master Project budget
  - Updated Project Development budget

  - Status of active subcontracts
  - Summary of key development accomplishments in the prior period and an overview of upcoming critical issues.
  - Status of DTP's financial contribution to the Project to date
- Subcontracting Plan, including list of proposed subcontractors
- Copies of subcontract agreements (upon request)
- Annual financial audits
- Disadvantaged Business Enterprise Program reports
- Quality Assurance/Quality Control Plan

2.9 Project Management: Work Breakdown

The Core, Incremental and Tasked components of Project Management activities are summarized in Table 2.

Table 2 -- Project Management Work Breakdown

Core Work	Incremental Work	Tasked Work
• Overall management of Development activities • Participate in Project partnering sessions • Establish and maintain Project Office, including information systems and communications • Provide and maintain Project Office support for Development activities, such as vehicles, office supplies, etc. • Project controls and reporting • Document control and Project files maintenance • Project Scheduling and budgets • Subcontracting and contract administration • Accounting, invoicing and financial records management • Obtain and maintain project insurance coverage • Quality Assurance/Quality Control	<None>	<None>

3 FINANCING SUPPORT

Funding for Phase 1 of the Project is expected to come from three sources: federal grants, state funding supported primarily by Dulles Toll Road excess revenues, and local funding from Fairfax County supported by revenues generated through the formation of a new transportation improvement district. DRPT will have overall responsibility for formulating and coordinating the Project's financial plan and for coordinating with other state agencies to deliver the state's share of project funding. The financial plan for Phase 1 will have implications for Phase 2 financing, and DRPT recognizes the need to take appropriate consideration of Phase 2 funding needs during the Development process for Phase 1.

3.1 Basic Financing Support

To provide a fully integrated approach to securing project funding (i.e., to ensure full coordination between the financing effort and other related Development activities), DTP will assist DRPT and other entities in discussions and activities related to financing the Project as a Core Work activity. DRPT will involve DTP in all such discussions and will provide to DTP all information relevant to the financing process. DTP will provide integrated coordination between the funding and financing effort managed by DRPT and the other development and preliminary engineering activities conducted by DTP. DTP will also provide a core resource of financial support to DRPT to review the plan of finance and advise on alternative financing approaches.

DTP will provide the following basic financing support:

- Participate in finance-related meetings to maintain full integration of financing efforts with the rest of the Development process;
- Review funding and financing documentation; including the Financial Plan and financing options;
- Advise DRPT on the financial implications of other development and preliminary engineering activities; and
- Assist DRPT in presenting the financial plan to various project stakeholders and the public. This activity will be conducted at DRPT's direction in conjunction with the Community Outreach activities described in Section 4 below.

3.2 Areas of Potential Additional Financing Support

During the Development process, DRPT may identify additional financing support needed from DTP. As requested from DRPT, will provide a range of financing support activities described below on a task order basis. The performance of any additional financing support tasks will require written authorization from DRPT and be subject to the scope, schedule and budget specified in the approved task order.

3.2.1 Financial Plan

DRPT and its funding partners will be refining and expanding the Project's financial plan throughout the development process. Because inputs to the plan of finance are continually evolving, it is critically important to have a central repository for financial planning assumptions, information and documentation. If requested by DRPT, DTP could provide the following services on a task order basis:

1. Consolidate all plan of finance information, maintain an electronic model of sources and uses of funding, analyze funding alternatives, and perform sensitivity analysis around agreed assumptions.
2. Develop inputs to the inputs to the financial plan, such as the amount and anticipated timing for uses of funds and the amount and timing of the anticipated funding.
3. Present the financial plan to various project funding participants for their review and approval. DTP could assist DRPT by preparing presentation materials, participating in review meetings and responding to stakeholder questions and requests for information.

3.2.2 Federal Transit Administration Funding

DRPT will be the applicant for FTA funding, and DTP will support DRPT in securing the highest possible funding for the Project costs from the FTA. To minimize transaction costs and increase the certainty of meeting total project funding objectives, it will be critical to carefully integrate federal funding with state and local sources. DRPT will prepare and submit to the FTA an application for a Full Funding Grant

Agreement (FFGA). This is an exhaustive process and successful grant applications require significant documentation of a broad range of project issues. If requested by DRPT, DTP would provide support to this process in the following areas on a task order basis:

1. Identify and prioritize key FFGA application requirements and support DRPT in coordination with FTA staff on FFGA-related issues. Track FTA requirements as they evolve during the application process and ensure that DRPT is aware of all current requirements.
2. Prepare inputs and supporting documentation for the FFGA application, including detailed descriptions of the following elements: the sources and uses of funds, background information on each of the non-federal funding sources, financing assumptions, mechanics of project funding and cash management, operating cost and revenue forecasts, sensitivity analyses of likely downside scenarios, and contingency plans for funding shortfalls.
3. Support FFGA negotiations by responding to information requests from DRPT or FTA, and providing additional supporting documentation.
4. Work closely with FTA, congress and other stakeholders to ensure that federal funding authorization and appropriations are in place to support the Project's funding needs.

3.2.3 Fairfax County Funding

DRPT will coordinate obtaining funding commitments from Fairfax County. If requested by DRPT, DTP would provide the following services on a task order basis:

1. Support Fairfax County in developing the scope and methodology for independent tax district revenue forecasts to facilitate FFGA approval and issuance of debt.
2. Assist Fairfax County in analysis of tax district structuring options that will facilitate funding of Phases 1 and 2.
3. Coordinate the County's funding documentation and mechanisms with those of the FTA and the Commonwealth.
4. On behalf DRPT, coordinate with Fairfax County to update on assumptions, timing, funding mechanics of its contributions.

3.2.4 Commonwealth Funding

DRPT will coordinate with other state agencies to ensure timely delivery of the Commonwealth's project funding commitment. If requested by DRPT, DTP would provide the following services on a task order basis:

1. Review scope and methodology for any traffic and revenue studies for the Dulles Toll Road prepared by VDOT to ensure that data needed to secure FFGA and to develop a financial plan for Phase 2 will be generated.
2. Analyze potential impact of Commonwealth funding options on viability of the financial plan for Phases 1 and 2.

3.2.5 TIFIA Credit Assistance

If requested by DRPT, DTP would provide the following services to assist in obtaining Federal credit assistance under the Transportation Infrastructure Finance and Innovation Act (TIFIA) on a task order basis:

1. Prepare the TIFIA letter of interest and application for DRPT.
2. Assist DRPT in responding to follow-up questions and information requests after the application is submitted.

3. Support the TIFIA borrower in loan negotiations with U.S. Department of Transportation.

3.3 Financing Support: Division of Responsibilities

The division of responsibilities for Financing Support activities is summarized in Table 3.

Table 3 -- Financing Support Responsibilities

Task	DRPT	WMATA	DTP
Project Financial Plan			
Capital Funding Plan	Manage and Prepare	Support	Support
Operating Funding Plan	Support	Manage and Prepare	
Full Funding Grant Agreement			
FFGA Negotiations	Manage	Support	Support
Local Capital Funding Agreements	Manage and Prepare	Support	Support
Annual New Starts Updates	Manage and Prepare	Support	Support

3.4 Financing Support: Deliverables

DTP deliverables required for Financing Support activities will be determined based on DRPT's approval of task orders for additional assistance.

3.5 Financing Support: Work Breakdown

The Core, Incremental and Tasked components of Financing Support activities are summarized in Table 4.

Table 4 -- Financing Support Work Breakdown

Core Work	Incremental Work	Tasked Work
• Support development of the Project Financial Plan • Participate in meetings and review financing documentation • Integrate financing efforts with other Development and PE activities • Advise on alternative financing options • Assist in presenting finance plan to other stakeholders and the public	• Analyze alternative financing options	• Additional Financing Support described in Sections 3.2.1 through 3.2.5. • Legal review of financing documentation

4 COMMUNITY OUTREACH AND STAKEHOLDER COORDINATION

To maintain strong public and business support for the Project and ensure full coordination with other related Development activities, DTP will assist DRPT in activities related to community outreach and stakeholder coordination. As part of its Core Work activities, DTP will:

- Support the ongoing NEPA public involvement program (prior to the Record of Decision)
- Coordinate community outreach and stakeholder coordination activities with DRPT
- Participate in community outreach activities and public information meetings and events

- Engage specialized consultants and manage community outreach activities (following the Record of Decision)

Until issuance of a Record of Decision, DRPT and WMATA will continue to manage execution of the existing community relations and public involvement program. Reference copies of all community outreach materials and electronic databases of Project stakeholders compiled during the NEPA process will be provided to DTP to expedite the transition of this management responsibility.

4.1 Community Outreach Plan

DTP will develop a Community Outreach Plan for review and approval by DRPT. During the development of this plan, DTP will meet with DRPT to clarify its interests, priorities, and expectations regarding community outreach. Key considerations in developing the outreach plan will include: a) assessing Project stakeholder needs and interests, b) ensuring open, timely, and consistent communications about the Project, c) establishing clear lines of communication (internal and external), d) ensuring that all Project staff are presenting a consistent message, and e) establishing a clear protocol for review and approval of Project information releases.

This plan will provide an overall framework for conducting the Project's public involvement and outreach program by identifying requirements and recommending specific activities to be undertaken during the Development phase. At a minimum, the Community Outreach Plan will:

- Assess community expectations and information needs
- Document the goals and objectives of the outreach program
- Identify recommended outreach activities
- Describe how the community outreach program will be managed
- Determine the most appropriate and cost-effective public information materials and educational techniques
- Develop media relations policies and procedures
- Assess Project image and identity
- Specify procedures for collecting, tracking and resolving public comments and responding to information requests (including Virginia Freedom of Information Act requests)
- Develop a process for addressing community issues that may arise during design or construction.
- Estimate the resources needed to implement the outreach program

The plan may also identify potential opportunities for improving or expanding current outreach efforts and the additional resources required. DTP will coordinate with DRPT the development of the Community Outreach Plan. DRPT will approve or disapprove the plan in writing within fifteen (15) business days after submission. The Community Outreach Plan will be reviewed and updated (subject to DRPT approval) at completion of Phase 1 Preliminary Engineering activities and prior to NTP for the Phase 1 design-build contract.

4.2 Community Outreach Activities

Following DRPT approval of the Community Outreach Plan, and as requested by DRPT, DTP will engage qualified subconsultants to implement specific components of the plan. These activities will be focused on keeping stakeholders informed about the Project's progress and maintaining strong community support for the Project. The performance of any outreach activities will require written authorization and will be subject to terms and conditions approved by DRPT. These outreach activities may include, but are not limited to, the following:

- Preparation of Project newsletters, brochures and fact sheets

- Development of a Project website
- Creation of a unique Project identity
- Survey research
- Project information site(s)
- Media relations
- Development of presentations or meeting materials
- Community event support
- Public comment tracking and preparation of responses to information requests

4.3 Project Stakeholder Coordination

As requested by DRPT, DTP will assist DRPT in coordinating with various government entities and related parties, including:

- FTA
- WMATA
- Commonwealth of Virginia agencies and departments
- Fairfax County
- MWAA
- Special transportation improvement district(s)
- Loudoun County (Phase 2)
- Town of Herndon (Phase 2)
- Toll Road Investors Partnership II – Dulles Greenway (Phase 2)

DTP will provide specialized subconsultants and policy advisors to further support DRPT's work with these Project stakeholders. Use of any such specialists' or their services will require written authorization from DRPT and be subject to the scope, schedule and budget specified in the approved task order.

4.4 Community Outreach and Stakeholder Coordination: Division of Responsibilities

The division of responsibilities for Community Outreach and Stakeholder Coordination activities is summarized in Table 5.

Table 5 -- Community Outreach and Stakeholder Coordination Responsibilities

Task	DRPT	WMATA	DTP
Community Outreach			
Community Outreach Plan	Approve	Review	Prepare
Public Involvement and Community Outreach Activities (Post-Record of Decision)	Approve and Participate	Support	Manage and Perform
Community Outreach Materials, Media Production, and Media Relations	Approve	Support	Manage and Prepare
Project Information Site(s)	Approve		Provide and Manage
Stakeholder Coordination			
FTA	Manage	Support	Support
Commonwealth Agencies and Departments	Manage		Support
Fairfax County, Loudoun County, Town of Herndon and Airports Authority	Manage	Support	Support

4.5 Community Outreach and Stakeholder Coordination: Deliverables

DTP deliverables associated with Community Outreach and Stakeholder Coordination activities include:

- Community Outreach Plan
- Community Outreach Plan components, as authorized and approved by DRPT, including but not limited to:
    - Project newsletters
    - Brochures and fact sheets
    - Project website
    - Media relations
    - Project identity
    - Survey research
    - Presentations
    - Community event support
    - Public information meetings
    - Project information site(s)
    - Telephone hotline
    - Comment tracking and resolution
    - Information request responses
- Minutes, notes, or other records documenting all community outreach, stakeholder coordination and support activities.

4.6 Community Outreach and Stakeholder Coordination: Work Breakdown

The Core, Incremental and Tasked components of Community Outreach and Stakeholder Coordination activities are summarized in Table 6.

Table 6** -- **Community Outreach and Stakeholder Coordination Work Breakdown

Core Work	Incremental Work	Tasked Work
• Coordinate community and public outreach activities with DRPT • Engage and manage community and public relations consultants • Participate in community outreach and public information events	• Develop Community Outreach Plan • Execute specific elements of Community Outreach Plan	• Project stakeholder coordination • Support from specialty consultants and policy advisors • Resource support to approved stakeholder groups

5 PROPERTY ACQUISITION

DTP will manage the acquisition of needed right-of-way and easements on behalf of DRPT for Phase 1 and will support right-of-way acquisition for Phase 2 on a task order basis as authorized by DRPT. Property acquisition activities will require coordination with the Preliminary Engineering effort to ensure that Project's technical requirements are satisfied. All right-of-way activities will be performed consistent with the VDOT's *Manual of Instruction – Right of Way Acquisitions*, the federal Uniform Relocation Assistance and Real Property Acquisition Policies Act, as amended, the Code of Virginia, and all other laws and regulations applicable to the right-of-way acquisition and appraisal processes. All acquisition activities conducted by DTP as DRPT's agent will be limited to property required for the construction and operation of the Project.

5.1 Property Identification and Right-of-Way Acquisition Plan

On behalf of DRPT and as its agent, DTP will conduct the following property identification activities as authorized by DRPT. All activities not included in the Core Work will be subject to terms and conditions approved by DRPT.

a) Using the current alignment and Preliminary Engineering right-of-way plans, identify affected properties on a tax map.

b) Using tax map information, research and obtain copies of all deeds of record for the affected properties.

c) Research courthouse records to locate each parcel, and confirm parcel boundaries and parcel ownership. This deed research will also include the determination of any special ownership conditions such as minors, heirships, trusts, etc.

d) Research existing utility rights, including any easements, covenants, or deed restrictions in coordination with establishing right-of-way requirements and provide this information for use in Preliminary Engineering activities.

e) Prepare an acquisition list using the Preliminary Engineering right-of-way drawings. This list will include those parcels identified in Volumes III and IV of the Draft Environmental Impact Statement (June 2002) and Volume II of the Supplemental Draft Environmental Impact Statement (October 2003), as well as updated parcels identified during preliminary engineering activities. The acquisition list will contain parcel numbers, ownership information, tax ID, deed reference, and the area of the parcel to be acquired, and type of acquisition (e.g., fee simple, lease, aerial easement, surface easement, subsurface easement, utility easement, drainage easement, or temporary construction easement).

f) Prepare a Right-of-Way Acquisition Plan for Phase 1 and 2 of the Project that incorporates the Preliminary Engineering right-of-way plans and the acquisition list. This Plan will identify the critical elements of the right-of-way acquisition process, including:

    - Acquisition strategy
    - Coordination tasks and documentation requirements
    - Acquisition schedule
    - Working right-of-way cost estimates
    - Relocation report(s), as applicable
    - Items that need to be resolved prior to acquisition (e.g. gaps and overlaps)
    - Prioritization of parcels for early or advance acquisition

    DRPT will approve or disapprove the plan in writing within fifteen (15) business days after submission by DTP. Subject to DRPT and FTA approval, DTP may advance property acquisitions prior to design-build NTP.

g) If additional properties to be acquired are identified as a result of Preliminary Engineering activities, DTP will submit revisions to the Right-of-Way Acquisition Plan and will obtain DRPT's written approval of the revised plan prior to undertaking any acquisition activities associated with the additional parcels to be obtained. DRPT shall approve or disapprove the revised plan within fifteen (15) business days of submittal.

5.2 Property Acquisition Activities

Following DRPT approval of the Right-of-Way Acquisition Plan, DTP, on behalf of DRPT and as its agent, will conduct the following property acquisition activities as authorized by DRPT. All activities will be subject to the terms and conditions approved by DRPT. Prior to DRPT approval of the Right-of-Way Acquisition Plan, DTP may request DRPT approval to negotiate and obtain access or temporary easements needed to conduct Preliminary Engineering or other work authorized by DRPT.

a) Prepare correspondence related to property acquisition for DRPT approval and signature, as required. This correspondence may include, but is not limited to: Notice of Inspection, Notice of Intent to Acquire, and Notice to Vacate.

b) Order and obtain or prepare property title reports, including all associated legal work.

c) Using certified appraisers from the VDOT-approved list, and subject to DRPT approval, perform Property Appraisals and Review Appraisals and prepare appraisal packages for DRPT review and approval. DRPT will have fifteen (15) business days within which to approve or disapprove of such appraisals in writing.

d) Develop standard conveyance terms and conditions for each type of property acquisition (e.g., fee simple, aerial easements, surface easements, subsurface easements, utility easements, drainage easements, and temporary construction easements) to be used in all acquisition agreements or contracts. As applicable, these standard terms and conditions will incorporate WMATA's requirements to allow operation and maintenance of the Project and facilitate future transfer of property rights.

e) Conduct final boundary surveys needed to support acquisition, and prepare legal descriptions and plats necessary for final offer. The completed plats will include final resolution of gaps and overlaps.

f) If necessary, deploy relocation specialists to provide counseling and processing of displacements or temporary relocations.

g) Prepare an acquisition package for DRPT approval that includes the following:

   - Offer letter;
   - Option or agreement (conveyance terms);
   - Appraisal package;
   - Legal description;
   - Plat delineating final boundary survey;
   - American Land Title Association (ALTA) extended coverage owner's policy of title insurance (1992 or 1970 form) issued by a title insurance company acceptable to DRPT and copies of documents identified in all exceptions listed therein and a plat of all easements identified therein;
   - Marked plan sheets (plan and profile; entrance profile, if applicable);
   - Utility agreement (if applicable); and
   - Environmental Contamination Report (if applicable).

   DTP will verify the accuracy and sufficiency of all documents included in the acquisition package.

h) Negotiate acquisition and conveyance terms with property owners. If applicable, negotiate and incorporate into agreements specific access provisions such as, but not limited to: rights of entry, duration of temporary easements, limits of contractor access, and available work hours.

i) Perform all closing activities required to support of DRPT's acquisition of property rights in accordance with the approved Right-of-Way Acquisition Plan and provide copies of all transaction documents to DRPT.

j) On a case-by-case basis, advise DRPT of the need to acquire properties through condemnation. Support condemnation proceedings, including preparation of required documentation, as requested by DRPT.

k) Maintain detailed records of all contacts with property owners and make such records available to DRPT upon request. Except for disclosures to DRPT or as designated by the State Attorney General in writing, DTP shall keep strictly confidential all records, appraisals, correspondence, and agreements arising out of DTP's acquisition activities. Should such records become the subject of a request for public disclosure, DTP shall immediately notify DRPT of such request.

l) Prepare and submit monthly reports that list each parcel; identify all properties that may be needed for acquisition and easements. The list will identify the property size, lot and parcel numbers, the property owner(s), and the area and type of acquisition(s). The list will also track estimates and updated forecast availability dates, and will specify the actions that will be required relative to each parcel.

5.3 Environmental Site Assessments

On behalf of DRPT, DTP will conduct will conduct environmental site assessments (ESA) for individual properties identified in the Right-of-Way Acquisition Plan, as authorized by DRPT, using the following process. All activities will be subject to the terms and conditions approved by DRPT.

a) Review the Phase I ESA survey reports prepared in support of the Project Draft Environmental Impact Statement to determine any outstanding issues and confirm the need for Phase II/III ESA surveys.

b) As required, perform Phase II/III ESA surveys consistent with ASTM Standard Guide E-1903-97) on properties to acquired. This Phase II assessment will determine if contamination is present on the property. If the Phase II work identifies the presence of contamination, the field investigation will expand into a limited Phase III effort to delineate the extent of contamination. The Phase II/III ESA surveys will include the following:

  - Development of a Phase II soil and groundwater sampling plan based on the Phase I ESA results.
  - Phased soil and groundwater field investigation.
  - Laboratory analysis of soil/ground water samples.
  - Evaluation of soil and groundwater analytical data.
  - Preparation of Phase II/III ESA reports, remedial action work plans, and an estimate of the costs to remedy any contamination.

c) Determine the extent of remediation necessary for required building demolitions by: 1) performing asbestos, lead-based paint, and hazardous material surveys of acquired/adjacent properties, 2) determining the number and nature of underground storage tanks (USTs) and above ground storage tanks (ASTs) requiring closure and remediation on acquired properties, and 3) prepare property-specific remedial action work plans for buildings and tanks.

d) For each affected property, DTP will prepare an Environmental Contamination Report that documents the results of the contamination analysis and recommended remediation measures.

5.4 Land Use and Planning Activities

As requested by DRPT, DTP will provide specialized services to advance potential transit-oriented or joint development opportunities along the corridor. Use of any such specialty services will require written authorization from DRPT and be subject to the scope, schedule and budget specified in the approved task order.

5.5 Property Acquisition: Division of Responsibilities

The division of responsibilities for Property Acquisition activities is summarized in Table 7.

Table 7 -- Property Acquisition Responsibilities

Task	DRPT	WMATA	DTP	MWAA
Parcel Ownership Maps and Tax Data	Approve		Prepare	
Title and Records Research	Approve		Manage and Perform	
Acquisition List	Approve		Prepare	
Right-of-Way Acquisition Plan	Approve	Review	Prepare	Review (MWAA Facilities)
Acquisition Correspondence and Notices	Approve		Prepare	
Property Appraisals	Approve		Manage and Prepare	
Standard Access and Conveyance Terms and Conditions	Approve	Support	Prepare	
Environmental Site Assessments – Phase II & III [if required]	Approve		Manage and Prepare	
Acquisition Packages	Approve	Review	Manage and Prepare	Review (MWAA Facilities)
Negotiation of Access Provisions and Acquisition Terms	Approve		Manage and Perform	
Relocation Assistance	Approve		Manage and Perform	
Condemnation Proceedings*	Support		Support	
Monthly Acquisition Status Report	Review		Prepare	

*Condemnation proceedings are managed by the Office of the Attorney General

5.5 Property Acquisition: Deliverables

DTP deliverables associated with Property Acquisition activities include:

- Right-of-way parcel and ownership maps
- Title research records and utility rights information
- Acquisition List
- Right-of-Way Acquisition Plan
- Standard conveyance terms and conditions for each acquisition type
- Monthly updates on status of right-of-way acquisitions
- Property acquisition correspondence and records

- For each parcel to be acquired:
  - Legal description of the parcel
  - Marked plan sheets
  - Plat delineating final boundary survey
  - Appraisal
  - Title report
  - Environmental Contamination Report (if required)
  - Offer package
  - Negotiated acquisition documents
  - Closing documents
  - Verification of accuracy and sufficiency of all documents provided
- As required, documentation to support condemnation proceedings including the following for each parcel:
  - Certification that requirements of effort to purchase have been met with statement of the manner of such compliance
  - Legal description of the parcel
  - Marked plan sheets
  - Plat delineating final boundary survey
  - Appraisal
  - Title report
  - Environmental Contamination Report (if required)
  - Offer package
  - Record of Negotiations, including copies of written offers to property owner and any written response from owner or representative
  - Expert testimony, as needed

5.6 Property Acquisition Work Breakdown

The Core, Incremental and Tasked components of Property Acquisition activities are summarized in Table 8.

Table 8 -- Property Acquisition Work Breakdown

Core Work	Incremental Work	Tasked Work
• Identify affected properties on tax maps • Prepare Right-of-Way Acquisition Plan • Engage and manage right-of-way acquisition agents, appraisers, environmental consultants and legal support • Develop standard property conveyance terms • Coordinate property acquisition with and obtain required approvals from DRPT • Prepare monthly property acquisition status reports • Maintain records and documentation of property acquisition activities • Support condemnation proceedings	• Research deeds, ownership and utility rights • Obtain title reports and utility rights information • Prepare appraisals • Prepare acquisition-related correspondence • Conduct environmental site assessments and prepare Environmental Contamination Reports • Relocation assistance • Prepare acquisition packages • Negotiate access provisions • Negotiate acquisition and conveyance terms • Conduct closing activities • Prepare packages for condemnation	• Land use planning and joint development support • Additional condemnation hearing support, such as expert witness testimony and technical support • Additional final boundary surveys

Core Work	Incremental Work	Tasked Work
	proceedings • Commercial legal support	

6 PROJECT DELIVERY SUPPORT

DTP will conduct a number of Development activities to support DRPT's construction of the Project and advance its implementation. As part of its Core Work, DTP will coordinate closely with the Preliminary Engineering team to coordinate Project delivery requirements and communicate results of Development activities. Other activities necessary to support DRPT delivery of the Project will be conducted as outlined in the following sections.

6.1 Master and Intergovernmental Agreements

Master or intergovernmental agreements covering activities related to the construction and operation of the Project will be needed with the following entities:

- WMATA
- Metropolitan Washington Airports Authority
- Virginia Department of Transportation
- Fairfax County
- Loudoun County (Phase 2)
- TRIP II – Dulles Greenway (Phase 2)

As authorized by DRPT, DTP will support DRPT's development of these agreements. All activities related to the preparation of master or intergovernmental agreements will be subject to the terms and conditions approved by DRPT.

6.2 Utility Coordination and Agreements

Construction of the Project will affect both existing and proposed utilities. DTP will perform various utility-related services for Phase 1 of the Project, and for Phase 2 on a task order basis as authorized by DRPT. All utility services provided will comply with the Code of Virginia, other applicable laws and regulations, and existing Commonwealth agreements with individual utilities. Utility-related activities will also be consistent with the guidance included in VDOT's *Manual of Instruction – Utilities* and standard industry practices. DRPT will provide DTP with copies of utility coordination documentation from the Project's NEPA phase.

a) DTP will perform overall utility coordination and ensure that utility facilities requiring relocation are properly identified. As necessary, DTP will facilitate meetings between the owners of utilities and the Development team to address issues and ensure the proper relocation of all affected utilities. Utility coordination activities will include, but are not limited to:

    - Records research to establish legal documentation of prior rights,
    - Identification of special provisions needed to ensure the continuation of service;
    - Identification of special provisions needed to protect the utility;
    - Identification of specials provisions governing the abandonment, relocation or removal of existing utilities;
    - Identification of special provisions needed to assure adequate right-of-way clearance for construction activities;
    - Legal descriptions of utilities requiring relocation;

- Review of existing franchise or master agreements related to utilities;
- Determination of design and construction responsibility for relocations;
- Determination of cost sharing responsibility for relocations; and
- Coordination of subsurface utility field verification investigations, as required

The identification of existing utility conflicts, preparation of composite utility plans, designs for required relocations, and cost estimates for utility relocations are included in the Preliminary Engineering Scope of Work.

b) If subsurface utility investigation is needed to confirm a utility location or determine the limits of disturbance, DTP will conduct this activity on a task order basis. DTP will provide a proposal for this activity that describes the planned test method (e.g., test holes, ground penetrating radar, etc.) and the use of any specialized subconsultants. All subsurface utility investigation activities will require written authorization from DRPT and be subject to the scope, schedule and budget specified in the approved task order. These subsurface utility investigation activities will require coordination with the Preliminary Engineering effort. The results of these investigations will be integrated into the Utilities Report and Preliminary Engineering utility plans.

c) DTP will prepare a comprehensive Utilities Report that identifies critical utilities issues; existing utility locations; preliminary utility relocation designs, drawings, abandonment or removal provisions; and a cost estimate for utilities-related work. This report will contain a relocation plan, a determination of critical path items, enlarged cross-section details of utility relocations, and summary of relocation agreement requirements. Technical inputs, such as drawings, designs, and cost estimates for utility relocations will be provided under the Preliminary Engineering Scope of Work. The report will also assess the impact on construction cost and schedule of utilizing separate advance utility contracts and may include benefit-cost analyses and alternatives analysis of relocation designs.

d) DTP will prepare utility relocation agreements needed to construct the Project. The utility relocation agreements will include, at a minimum, the following information:

- Description of utility facility to be moved
- Location of facility (existing and proposed)
- Calendar days needed for relocation work
- Schedule for completing work (prior to or during construction)
- Party responsible for physical relocation work (i.e., utility company or design-build contractor)
- Party responsible for costs associated with relocation

DTP will facilitate meetings between the owners of utilities and the Development team to address concerns and to establish agreements that allow the appropriate relocation of all affected utilities. In some cases, these relocation activities may be arranged within the context of an existing master agreement between the Commonwealth, WMATA, or MWAA and an individual utility. These agreements will document the most appropriate and cost-effective methods for completing relocation activities.

e) If authorized by DRPT, DTP would support development of service agreements to provide utilities required for the operation of the Project. In some cases, these services may be arranged within the context of an existing master agreement between WMATA and an individual utility. If applicable, DRPT will provide DTP copies of existing WMATA service agreements. This effort will require written approval from DRPT and be subject to the scope, schedule and budget in the approved task order.

f) If authorized by DRPT, DTP would coordinate any advanced utility relocation activities conducted by utility owners. This effort will require written approval from DRPT and be subject to the scope, schedule and budget in the approved task order.

g) Prepare and submit monthly reports detailing the current status of ongoing utility coordination, relocation agreements, and relocation activities. This report will also track utility relocation cost estimates, identify anticipated completion dates, and specify additional actions required for each relocation.

6.3 Permits and Approvals

DTP will obtain, or support DRPT's acquisition of all necessary permits and approvals required for construction of the Project. DTP acknowledges and agrees that it is familiar with all laws, regulations and ordinances related to permitting activities, as well as the conditions of any required regulatory approvals and their applicability to the Project. For those permits and approvals specified in Exhibit I of the Comprehensive Agreement, DTP will prepare DRPT's application (or support submission) of required information to the issuing agency or jurisdiction. For all other permits or approvals that may be necessary for the Project, such as building permits, construction permits, use permits, work hour permits, demolition permits, and comprehensive plan variances, DTP is responsible for obtaining the permits (or approvals) from the appropriate agency or authority.

As authorized by DRPT, DTP will conduct the following permitting activities on behalf of DRPT for Phase 1 of the Project. All permitting activities not included in the Core Work will be subject to the terms and conditions and budget approved by DRPT. Any activities related to permitting (or approvals) for Phase 2 of the Project will be conducted on a task order basis.

a) Identify and confirm all permits, approvals and associated fees required for the Project. DTP will also identify areas where obtaining a single permit (or approval) for the entire Project will result in cost or schedule savings.

b) Coordinate with all federal, state, or regional agencies and local jurisdictions with permitting or approval authority for the Project.

c) Develop a Permitting Plan that outlines the approach for obtaining required permits and approvals, including, but not limited to the following information:

    - Matrix listing all required permits and approvals, necessary supporting documentation, and estimates of associated fees;
    - Extent and scope of engineering detail needed to support permit applications;
    - Potential sensitive issues or challenges to obtaining permits and approvals;
    - Recommended sequencing [priorities] for obtaining permits and approvals; and
    - Proposed schedule for permitting activities including key preparation, submittal, and issuance milestones.

    DRPT will approve or disapprove the Plan in writing within fifteen (15) business days after submission by DTP. Upon approval, DTP will be authorized to initiate preparation of permit applications or approval materials.

d) Prepare permit applications and approval submittals in accordance with the approved schedule. DRPT will be the responsible public agency on all permits and approvals not issued directly to DTP. DTP will coordinate with the Preliminary Engineering effort to obtain supporting engineering calculations, technical specifications, designs, and operational analyses necessary to complete the applications. Where applicable, DTP will coordinate the WMATA and/or MWAA review of permit applications or approval materials and reconcile any outstanding issues.

e) Coordinate with agencies during application review and permit negotiation. Support agency reviews, and if necessary, amend or supplement permit (or approval) applications to reflect design changes resulting from the Preliminary Engineering effort.

f) Maintain a master file of all issued permits and approvals, and identify any specific design requirements or mitigation measures necessary to maintain permit compliance during construction.

g) Prepare and submit monthly reports detailing the current status of ongoing permitting and approval activities. This report will also track any associated permitting fees, identify anticipated submittal dates, and specify any additional actions required to complete each permit (or approval).

h) Support the Project's community outreach efforts related to permitting and governmental approvals, including preparation of materials and participation in meetings.

6.4 Value Planning

DTP will conduct Value Planning for Phase 1 in advance of initiating of Preliminary Engineering for the Project. Value planning is the systematic, multi-disciplined effort directed towards analyzing a project's purpose, its primary function, and determining options for achieving a more cost-effective design. This effort will identify potentially cost-effective design modifications and provide a foundation for the detailed engineering design. This Value Planning effort is not intended to fulfill FTA's requirement to complete an independent Value Engineering review during the Preliminary Engineering.

a) Using a systematic value planning approach, DTP's transit-specialized, certified value specialists will act as team leaders and facilitate an initial analysis of the Project's major cost drivers. Professional experts outside the Project who have not been involved in the design will assist DTP. Other participants in the value planning process will include DTP's Preliminary Engineering team, DRPT and its consultants, and WMATA. A detailed work plan outlining the value planning process will be submitted to DRPT for approval prior to initiating any value planning activities.

b) DTP will conduct a series of value planning workshops analyzing the following Project elements will be held between DTP's value planning team and other participants:

    - Station Configuration and Finishes – Tysons Corner area and Dulles International Airport Access Highway median;
    - Elevated versus Underground Alignment through the Tysons Corner area;
    - Aerial Structure Design for Highway Crossings;
    - Constructability of Line, Track, Station, and Ancillary Facility Designs; and
    - Cost-Effectiveness of Systems Design

    Additional elements for value planning review may be identified during these workshops. DRPT will provide DTP with the Project's current General Plans and engineering analyses to support the value planning effort.

c) Based on these workshops, DTP will prepare a report (or series of reports) summarizing the value planning effort. This report will include a recap of the workshop sessions, final value planning recommendations for consideration by DRPT and WMATA, and the rationale for each recommendation, and its potential capital and life cycle cost savings.

6.5 Project Delivery Support: Division of Responsibilities

The division of responsibilities for Project Delivery Support activities is summarized in Table 9.

Table 9 -- Project Delivery Support Responsibilities

Task	DRPT	WMATA	DTP	MWAA
Coordination of Development Activities with PE Activities	Manage	Support	Perform	
Master or Intergovernmental Agreements	Manage and Prepare	Review (as applicable)	Support	Review (as applicable)
Utilities				
Comprehensive Utilities Report	Approve	Review	Prepare	
Utility Relocation Coordination	Approve and Participate	Support	Manage and Perform	
Utility Relocation Agreements	Approve	Review (as applicable)	Manage and Prepare	Review (as applicable)
Monthly Utilities Status Report	Review		Prepare	
Permits and Approvals				
Identify Permit Requirements	Approve	Support	Perform	
Permit Acquisition Strategy and Plan	Approve		Prepare	
Permit Applications	Approve	Review (as applicable)	Manage and Prepare	Review (as applicable)
Submit Permit Applications	Perform (Permits issued to DRPT)		Perform (Permits issued to DTP)	
Permit Fee Payment	Approve and Perform			
Monthly Permitting Status Report	Review		Prepare	
Value Planning				
Conduct Value Planning Workshops	Participate	Participate	Manage and Perform	
Analyze Value Alternatives for Advancement	Manage	Participate	Prepare	
Adopt Value Alternatives into Project Design	Approve	Approve	Perform	

6.6 Project Delivery Support Deliverables

DTP deliverables associated with Project Delivery Support activities include:

- **Master or Intergovernmental Agreements**
  - Draft agreements or inputs for agreements
  - Minutes, notes, or other records documenting all master or intergovernmental agreement activities
- **Utility Coordination and Agreements**
  - Utilities Report
  - Utility relocation agreements
  - Subsurface utility field investigation proposal(s)

  - Utility service agreements
  - Minutes, notes, or other records documenting all utility coordination and relocation activities.

- **Permits and Approvals**
  - Permitting and approvals acquisition plan
  - Completed permit applications
  - Master file of issued permits and approvals
  - Minutes, notes, or other records documenting all permitting and approvals activities.

- **Value Planning**
  - Value planning work plan
  - Value planning workshops
  - Value planning report(s)
  - Minutes, notes, or other records documenting all value planning activities.

6.7 Project Delivery Support Work Breakdown

The Core, Incremental and Tasked components of Project Delivery Support are summarized in Table 10.

Table 10 -- Project Delivery Support Work Breakdown

Core Work	Incremental Work	Tasked Work
• Coordinate Development activity with PE activities • Support preparation of master or intergovernmental agreements • Engage and manage utility, permitting, and legal consultants **Utility Coordination and Agreements** • Arrange and participate in meetings with owners of affected utilities • Prepare and negotiate relocation agreements with utility owners • Coordinate utility relocation activities • Prepare monthly utility coordination status reports **Permits and Approvals** • Prepare monthly permit application status reports **Value Planning** • Engage and manage value planning consultant • Conduct value planning workshops	**Utility Coordination and Agreements** • Conduct research on ownership, type, and locations of affected utilities • Prepare comprehensive Utilities Report **Permits and Approvals** • Identify required permits and approvals • Develop permit acquisition strategy and plan • Arrange and participate in meetings with regulatory agencies involved in permitting or approval • Prepare and submit permit applications or approval materials	**Utility Coordination and Agreements** • Conduct subsurface field investigations of utilities • Support development of new utility service agreements • Coordinate advance utility relocations performed by utility owners • Utility agreement legal support **Permits and Approvals** • Specialized permitting analyses or designs • Permitting legal support

EXHIBIT F-2

PHASE 1 DEVELOPMENT WORK – PRICING AND COMPENSATION

A. **PAYMENTS:** The Department's payments to DTP shall be made by electronic wire transfer.

B. **DEVELOPMENT WORK BUDGET:** The approved budget for Development Work is provided in Table F-1 and is divided into three categories as defined in Section 5.2 of this Agreement. The three categories are:

Core Development Work – consists of DTP staff labor over a 20-month period, other direct costs associated with the core development staff, the establishment and ongoing costs of the project office and facilities, and the value planning scope activity. Core Development Work shall not commence until the Department issues an NTP.

Incremental Development Work – includes specified consultants and commercial legal support which shall not commence until the Department issues written authorization.

Tasked Development Work – includes support activities which shall not commence until the Department issues task orders for such.

C. **DIRECT LABOR COSTS:** The Department shall pay DTP its direct labor costs required for performance of Phase 1 Development Work at the rate of actual salaries paid to employees plus 112.95% overhead (which amount includes employee benefits and employer's portion of payroll taxes, workers compensation and other insurances).

D. **NON-LABOR DIRECT COSTS:** The Department shall pay DTP its non-labor direct costs including:

1. Actual costs for purchase and rental of materials, supplies and equipment necessary for the performance of Development Work, plus the cost of communications, outside printing and reproductions, postage, couriers, technical computations, consumables and miscellaneous expenses directly chargeable to the Project.
2. Actual costs for subcontracted work.
3. Application fees for permits and other required government submittals.
4. With prior approval by the Department, payments made by DTP in support of Project stakeholders.
5. Actual cost of Project-specific insurance.
6. Actual cost of leasing, maintenance and operation of approved Project vehicles.
7. Actual payments for Fairfax County Gross Receipts Tax.

Table F-1 Approved Budget for Phase 1 Development Work

	Core	Incremental	Tasked	Total
Jobhours				
DTP Development Staff	43,520	3,060	-	46,580
Office Mgmt & Facility Support	10,200	-	-	10,200
Total Jobhours	**53,720**	**3,060**	**-**	**56,780**
Development Budget ($000's)				
Direct Labor Costs				
DTP Staff Salaries	2,861	205	0	3,066
Office & Facility Salaries	435	0	0	435
Subtotal Salaries	3,296	205	0	3,500
Overhead Multiplier @ 112.95%	3,722	231	0	3,954
Subtotal Direct Labor	**$7,018**	**$436**	**$0**	**$7,454**
Non-Labor Direct Costs				
Subcontracts	866	4,923	1,070	6,859
Gross Receipts Tax	197	18	4	219
Project Specific Insurance	1,540	0	0	1,540
Other Non-Labor Direct Costs	133	0	200	333
Subtotal Non-Labor Direct Costs	**$2,737**	**$4,941**	**$1,274**	**$8,951**
Project Office Costs				
Rent	2,520	0	0	2,520
Other Direct Costs	3,039	0	0	3,039
Subcontracts	342	0	0	342
Gross Receipts Tax	18	0	0	18
Subtotal Project Office Costs	**$5,919**	**$0**	**$0**	**$5,919**
Fee and Other Costs – Fixed Sum	**$1,500**	**$0**	**$0**	**$1,500**
Total Development Budget	**$17,173**	**$5,378**	**$1,274**	**$23,824**

EXHIBIT G-1

SCOPE OF PHASE 1 AND 2
PRELIMINARY ENGINEERING WORK

The Scope of Work for Phase 1 and Phase 2 Preliminary Engineering was developed jointly by the Department and WMATA with input from DTP to address requirements for compliance with WMATA and other jurisdictional design standards and to provide a basis for pricing design-build contract(s) for the Project.

The fixed price for the Phase 1 and Phase 2 Preliminary Engineering covers the Scope of Work defined by the following four documents contained in this Exhibit G-1:

1. Preliminary Engineering Scope of Phase 1 and Phase 2 Preliminary Engineering Work
2. Delegation of Authority to WMATA (Attachment A)
3. Preliminary Engineering Drawing List (Attachment B)
4. Exclusions, Assumptions and Clarifications (Attachment C)

The four documents together comprise the Preliminary Engineering Scope of Work and shall be read together and interpreted accordingly.

The Department's Delegation of Authority to WMATA (Attachment A) outlines the authority granted to WMATA as Technical Manager of Preliminary Engineering and ultimate owner and entity responsible for operation and maintenance of the completed Project.

The Preliminary Drawing List (Attachment B) identifies all drawings to be produced that are required to satisfy the Preliminary Engineering Scope of Work. The content and level of completion for each drawing developed during Preliminary Engineering Work is specified by scope paragraph in the Preliminary Engineering Scope of Work.

The Exclusions, Assumptions and Clarifications (Attachment C) identify items that are either outside the Preliminary Engineering Scope of Work or provide a clarification to a particular Scope of Work item. This was developed to reinforce a mutually agreed interpretation of the Scope of Work by the Department, WMATA and DTP.

TABLE OF CONTENTS

1.0 GENERAL 1

1.1 Introduction 1

1.2 Purpose 1

1.3 Project Description 1

1.4 Treatment of Items Pending NEPA Review 2

2.0 PROJECT MANAGEMENT 3

2.1 Roles and Responsibilities 3

2.2 Consultant's Staffing and Organization 3

2.3 Preliminary Engineering Activities Schedule-Progress Updates 3

2.4 Project Execution Plan 4

2.5 Quality Assurance and Quality Control 4

2.6 Consultant Coordination 4

2.7 Document Control 5

3.0 DOCUMENTS PROVIDED TO CONSULTANT BY WMATA 5

3.1 WMATA Design Documents 5

3.2 Other WMATA Documents 6

3.3 NEPA Process Documents 6

4.0 TECHNICAL SERVICES TO BE PERFORMED BY THE CONSULTANT 8

4.1 General 8
  4.1.1 Basis of Preliminary Engineering Design 8
  4.1.2 Project Phasing 8
  4.1.3 Levels of Detail in Preliminary Engineering Design 8
  4.1.4 Operational Considerations 9
  4.1.5 Standards and Design Criteria Review 9
  4.1.6 Specifications 10

4.2 Civil 10
  4.2.1 Survey Controls and Alignment 10
  4.2.2 Right-of-Way 11
  4.2.3 Geotechnical 12
  4.2.4 Utilities 12
  4.2.5 Storm Water Management and Drainage Design 13

4.2.6 Roadway Alignments, Access Roads, Parking Lots and Pavement Restoration .. 13
4.2.7 Traffic Analysis and Maintenance of Traffic 14
4.2.8 Construction and Design-Build Coordination 14
4.2.9 Track Alignment Plan and Profile 15
4.2.10 Other Civil Engineering 16
4.2.11 Noise and Vibration Analysis 16

4.3 Trackwork Design 16

4.4 Structural 17
4.4.1 Metrorail Line 17
4.4.2 Stations and Facilities 17

4.5 Architectural 18
4.5.1 Architectural Design Consultant 18
4.5.2 Design Concept Development and Presentations 19
4.5.3 Fire/LifeSafety Analysis 20
4.5.4 Accessibility Compliance Report 20
4.5.5 Arts-in-Transit Program 20
4.5.6 Yard & Shop Facilities Program 21
4.5.7 Architectural Preliminary Engineering Drawings 21

4.6 Landscaping 24
4.6.1 Metrorail Line 24
4.6.2 Stations and Facilities 24

4.7 Mechanical 24
4.7.1 Metrorail Line: 25
4.7.2 Stations and Facilities 25

4.8 Electrical and Traction Power 26
4.8.1 Metrorail Line 27
4.8.2 Stations and Facilities: 27

4.9 Automatic Train Control 28
4.9.1 Metrorail Line 28
4.9.2 Stations and Facilities 30

4.10 Communications Systems 30
4.10.1 Metrorail Line 31
4.10.2 Stations and Facilities 32

4.11 Automatic Fare Collection Systems 33
4.11.1 Stations and Facilities 33

4.12 Intelligent Transportation Systems 33

4.13 Safety and Security 33

4.14 Contamination Analysis 34

4.15 Permits 35

4.16 Special Tasks, Studies, Presentations 36

4.17 Cost Estimates 36
4.18 Schedule for Preliminary Engineering Activities and Design-Build Implementation 36
4.19 Value Engineering 37
5.0 REVIEW OF THE PRELIMINARY ENGINEERING WORK PRODUCTS 38
6.0 DELIVERABLES 40

ATTACHMENTS:
Attachment A – DRPT Delegation of Authority to WMATA
Attachment B – Preliminary Engineering Drawing List
Attachment C – Exclusions, Assumptions and Clarifications

1.0 GENERAL

1.1 Introduction

The Virginia Department of Rail and Public Transportation (DRPT) will conduct Preliminary Engineering for the Dulles Corridor Rapid Transit Project (DCRTP or Project). Preliminary Engineering follows the selection of a Locally Preferred Alternative for the Project and represents the next phase of the Federal Transit Administration's project development process.

This Scope of Work describes the professional engineering and architectural services required to complete Preliminary Engineering for the Project. Activities outlined in this scope will be performed under the overall management of the DRPT and the direct technical management of the Washington Metropolitan Area Transit Authority (WMATA), the Project's ultimate owner and operator.

1.2 Purpose

This Scope of Work will serve as the basis for performance of Preliminary Engineering by the Preliminary Engineering Consultant (Consultant) to be provided by Dulles Transit Partners, LLC (DTP). The work to be performed will include professional engineering and architectural services, as well as technical, administrative, and other services necessary to prepare and provide the agreed upon drawings, reports, and supporting documentation. Preliminary Engineering for the Project will be advanced to a sufficient level of detail to:

- Demonstrate compliance with WMATA design requirements and standards,
- Support negotiation of a firm fixed price Design-Build Agreement between DRPT and the Dulles Transit Partners, LLC under the Commonwealth's Public Private Transportation Act (PPTA), or
- Enable DRPT to advertise, negotiate and award design-build contract packages with another design-build contractor(s).

1.3 Project Description

a. The DCRTP is an extension of the existing 103-mile Metrorail system from the current Orange Line in Fairfax County through Tysons Corner to Washington Dulles International Airport and beyond the airport to Route 772 in Loudoun County. The Project consists of approximately 23.1 miles of new rapid rail transit system with 11 stations, and a new Service and Inspection Yard. The Locally Preferred Alternative (LPA) adopted by the Commonwealth Transportation Board and the WMATA Board of Directors includes Metrorail Alternatives O1, T6, D1, A1, L1 and Y15, as shown on the June 2002 General Plans prepared as part of the Project's Draft Environmental Impact Statement (Draft EIS).

b. DRPT and WMATA are considering revisions to the adopted LPA as part of the Federal National Environmental Policy Act (NEPA) process. If necessary, following this environmental evaluation, any changes to the adopted LPA would be approved by the Commonwealth Transportation Board and the WMATA Board of Directors.

c. DRPT intends to phase construction of the DCRTP. Phase 1 of the Project will be the initial 11 miles of the LPA from the current Orange Line to Wiehle Avenue. It will include

5 stations, improvements to existing WMATA Service and Inspection Yards, and tail tracks outbound of the interim terminus at Wiehle Avenue. Phased construction may require additional refinements to some facilities. Phase 2 of the Project will complete construction of the LPA between Wiehle Avenue and Route 772 in Loudoun County, add 6 additional stations, and a new Service and Inspection Yard

1.4 Treatment of Items Pending NEPA Review

a. Preliminary Engineering activities for the DCRTP will be conducted concurrently with the completion of the Project's Final Environmental Impact Statement (Final EIS). DRPT and WMATA have identified several Project elements and technical issues that will be further evaluated as part of the ongoing NEPA process. Following completion of this environmental review and public input, some or all of these changes may be formally adopted as part of the Project's LPA. Initiation of Preliminary Engineering activities on these elements will be deferred until they are formally incorporated into the LPA and approved by the Commonwealth Transportation Board and the WMATA Board of Directors.

b. Recommended mitigation measures are identified in the Draft EIS and should be considered during the development of the Preliminary Engineering plans. Formal mitigation commitments that must be incorporated into the Project's design will be detailed in the Final EIS and Record of Decision. At that time, the Preliminary Engineering plans may require revisions to address required mitigation measures.

2.0 PROJECT MANAGEMENT

2.1 Roles and Responsibilities

a. Management of Preliminary Engineering will be conducted in accordance with the DCRTP Project Management Plan. The role of the each participant in the Preliminary Engineering effort is as follows:

   Program Manager (DRPT). DRPT is the Project Sponsor and overall Program Manager responsible for Project oversight, cost control, schedule, Federal grant management, and contracting authority.

   Preliminary Engineering Technical Manager (WMATA). Under contract to DRPT, WMATA will serve as the Technical Manager for Preliminary Engineering. The Project Manager will be responsible for day-to-day management of the Project's engineering design and operational planning, internal WMATA coordination, and assurance that the Project is implemented in accordance with current WMATA design criteria and standards. DRPT will delegate authority for managing activities included in this Scope of Work to WMATA as specified in **Attachment A**.

   Consultant (Dulles Transit Partners). The Consultant will conduct all Preliminary Engineering activities outlined in this Scope of Work and prepare the plans and documentation necessary to support a design-build construction approach for project delivery.

b. The Consultant, DRPT, WMATA, and partner agencies will conduct a Partnering workshop at the initiation of Preliminary Engineering. The purpose of this workshop is to outline the Project's management structure, discuss procedures and reporting relationships, and team building. The Consultant will make necessary arrangements for a two-day workshop for at least 30 participants, provide appropriate facilitation and support staff, and prepare a summary of the workshop's results.

2.2 Consultant's Staffing and Organization

a. The Consultant will provide the full resources necessary to complete the managerial, technical, administrative, audit and quality assurance/quality control tasks associated with Preliminary Engineering.

b. The Consultant's key personnel for the Preliminary Engineering effort, defined as the Project Manager, Deputy Project Manager(s), discipline leads and key subconsultants will be subject to review and approval by DRPT and WMATA. The Consultant will submit the full management team that will complete the work, including position titles and names of staff that will occupy these positions, and the dates they will begin working on the Project. The Project Manager, Deputy Project Manager--Design, and all Engineering and Architectural leads are required to be registered Professional Engineers or Architects unless otherwise approved by DRPT.

2.3 Preliminary Engineering Activities Schedule - Progress Updates

a. The Consultant will submit a detailed Primavera Preliminary Engineering Activities Schedule ("PE Activities Schedule") for approval within 120 days after receipt of NTP.

This schedule will be reviewed by DRPT, WMATA and partner agencies. After approval by DRPT, it will serve as the Baseline Schedule for Preliminary Engineering services.

b. The schedule must indicate proposed progress of each task on a monthly basis and the status of deliverables. The schedule will be updated monthly and will be coordinated with the expenditure projection. A copy of the updated schedule will be submitted as part of the monthly progress payment package.

c. A project status report indicating the completion status of active deliverables will be submitted monthly as part of the progress payment package.

2.4 Project Execution Plan

a. The Consultant will, within 120 days of the NTP, provide DRPT and WMATA with a Project Execution Plan. This plan will include policies and procedures to address project execution and management during Preliminary Engineering. The plan will be updated during Preliminary Engineering to reflect implementation and conversion to the Design-Build phase. All procedures in the Project Execution Plan will be consistent with the policies and requirements outlined in the DCRTP Project Management Plan.

2.5 Quality Assurance and Quality Control

a. The Consultant will, within 30 days of the NTP, provide DRPT and WMATA with its proposed Quality Assurance/Quality Control (QA/QC) Plan for Preliminary Engineering activities.

b. The Preliminary Engineering QA/QC Plan will include, but will not be limited to, the following:

- Qualifications of QA/QC personnel.
- Organization, function, and interfaces of QA/QC program
- Qualifications of key staff members responsible for design in each discipline.
- Procedures providing adequate inter-discipline coordination and uniform system of independent checking.
- Procedures for documenting implementation of QA/QC program, deficiency reports, and follow-up and corrective actions.
- QA/QC program review schedules.

c. DRPT and/or WMATA may elect from time to time to audit the Consultant's QA/QC Program. Audits may take place within the office of the Consultant, joint-venture firms or its sub-consultants.

2.6 Consultant Coordination

a. The Consultant will coordinate through the WMATA Preliminary Engineering Manager any contacts with staff, offices and departments of WMATA and its consultants. Contacts with other public agencies, utilities, private companies, and property owners will be coordinated with the DRPT Deputy Project Director for Preliminary Engineering or the WMATA Preliminary Engineering Manager, as appropriate.

b. The Consultant will participate in Weekly Project Management meetings and Monthly Progress Review meetings. The Consultant will be responsible for preparing agendas, meeting minutes and maintaining complete records of results, decisions, and actions of these meetings.

c. The Consultant will record minutes for all meetings in which it participates.

2.7 Document Control

During Preliminary Engineering, the Consultant will:

a. Maintain a library and database of all documents provided to the Consultant and those prepared during Preliminary Engineering.

b. Establish and maintain a common filing system that accommodates DRPT, WMATA, and Project documentation requirements.

c. Use the IBM-PC computer platform and the following software standards:

- Operating system: Windows 2000, XP or NT 4.0
- CADD: Microstation Version 8.1 and related applications software for preparing CADD drawings. Final Preliminary Engineering drawing submittals will be AutoCAD 2000 compatible.
- Geographic Information System: ESRI ArcView or ArcGIS
- Word processing: Microsoft Word
- E-Mail: Microsoft Outlook
- Spreadsheet: Microsoft Excel
- Database: Microsoft Access
- Presentation: Microsoft PowerPoint
- Scheduling: Primavera
- Web Site: Microsoft Front Page 2000
- Font Standard: Universal or Arial 12 Point

d. Establish and maintain an Extranet system for use at the DCRTP Project Office, DRPT offices (up to 5 locations), WMATA offices (up to 5 locations), partner agency offices (up to 5 locations), and primary consultant and sub-consultant offices. The Project Extranet system will be operational within 120 days of the NTP and system training will be provided to all users.

3.0 DOCUMENTS PROVIDED TO CONSULTANT

3.1 WMATA Design Documents

a. WMATA Manual of Design Criteria (March 2003)

b. WMATA Design Drawings (March 2003)

c. WMATA Standard Drawings and Specifications (March 2003)

d. WMATA Standard Specifications (March 2003)
e. WMATA Manual of Technical Specifications and Requirements for Survey Services (July 2001)
f. WMATA CADD Manual (November 1999)

3.2 Other WMATA Documents

a. WMATA Conformed Plan Sets for Largo Extension Construction Contract Package 160041 (March 2003)
b. WMATA Conformed Plan Sets for Largo Extension Construction Contract Package 160042 (June 2002)
c. WMATA Design Criteria Changes Considered and Adopted for Largo Extension (June 2002)

d. WMATA Safety and Security Certification Program Plan (July 2003)

3.3 Metropolitan Washington Airports Authority (MWAA) Documents

a. MWAA Design Manual
b. Dulles Airport Access Road: As-Built Plans

3.4 Virginia Department of Transportation (VDOT) Documents

a. VDOT Road Design Manual
b. VDOT Road and Bridge Standards
c. Highway Laws of Virginia
d. VDOT Manual of Instruction – Right-of-Way Acquisitions (Volume I)
e. VDOT Manual of Instruction – Materials Division (2001 Edition)
f. VDOT Manual of Instruction – Utilities (Volume II)
g. VDOT Tysons Corner Collocation Study

3.5 NEPA Process Documents

a. General Plans (June 2002)
b. Draft Environmental Impact Statement and Section 4(f) Evaluation (June 2002)
c. Draft Environmental Impact Statement Technical Reports (June 2002):
    - Economics and Secondary Development Effects
    - Air Quality
    - Noise and Vibration
    - Visual and Aesthetic Resources
    - Land Use and Socio-economics
    - Transit Operations and Maintenance Plan
    - Traffic Analysis and Station Access Study

- Cultural Resources
- Natural Resources
- Hazardous and Contaminated Materials
- Travel Demand Forecasting Methodology and Results
- Travel Demand Forecasting Methodology and Results Appendix

d. Capital Cost Methodology Report (June 28, 2002)

e. Engineering Design Report (September 2002)

f. Facilities Design Report (June 2002)

g. Control and Topographic Surveys

h. Preliminary Geotechnical Investigation Final Report (September 2001)

i. Public Hearing Report and Supplement (September and November 2002, respectively)

j. Final Recommendations of the Project Team for the Locally Preferred Alternative (November 2002) approved by the WMATA Board and the Commonwealth Transportation Board

4.0 TECHNICAL SERVICES TO BE PERFORMED BY THE CONSULTANT

4.1 General

4.1.1 Basis of Preliminary Engineering Design

a. The Project's General Plans (June 2002) will be the basis from which to proceed into Preliminary Engineering. WMATA design standards and criteria are to be used to develop the Preliminary Engineering plans and specifications. Deviations from WMATA standards and criteria will only be allowed if approved in advance by the WMATA Design Control Board.

b. All roadway plans will comply with MWAA and VDOT design standards and criteria, as applicable. Conceptual designs developed during Preliminary Engineering will consider and incorporate existing roadways (or approved relocations), and will not preclude future roadway improvements identified in the region's current Constrained Long-Range Plan or programmed for construction by MWAA, VDOT or local jurisdictions.

c. As required, all Preliminary Engineering plans will comply with Federal, Virginia, and local jurisdiction building codes, environmental regulations, and associated agency requirements.

d. Prepare a Basis of Design Report that summarizes the applicable design criteria and standards to be used for Preliminary Engineering. These criteria and standards will incorporate, as applicable, MWAA, VDOT and local jurisdiction requirements.

4.1.2 Project Phasing

a. The Preliminary Engineering plans, reports and supporting documents will be developed in a manner that allows separation of the Project into two phases of construction and rail operations: Phase 1 – extending Metrorail service from the junction with the Orange Line near the West Falls Church Station to the Wiehle Avenue Station, and Phase 2 – extending Metrorail service from the Wiehle Avenue Station to the Route 772 Station in Loudoun County.

b. For Phase 1 of the Project, the Consultant will develop at a minimum, three complete design-build packages including drawings, technical specifications, and general conditions required for bidding. These packages will include one package for early construction activities, one package for line, track, and systems work and one package for stations. The Consultant may recommend, and upon approval from DRPT, prepare a different set of design-build construction packages.

c. For Phase 2 of the Project, the Consultant will develop one complete design-build package for the remaining portion of the LPA.

4.1.3 Levels of Detail in Preliminary Engineering Design

The Consultant will complete Preliminary Engineering to the following levels of detail as specified in this Scope of Work.

Level N: The Consultant is not required to provide concepts or design of the work beyond what is required to support the preparation of cost estimates. The Final Designer(s) will have full flexibility to develop its own concept and is responsible for providing details in the final design documents.

Level 1: In addition to design required to support preparation of capital cost estimates, the Consultant shall provide suggested schemes, notations or narratives to demonstrate that the required work is technically achievable. The Final Designer(s) will be responsible for developing its own concepts and for providing details in the final design documents.

Level 2: The Consultant will provide design requirements and specific concepts that are essential for the Project. The requirements and concepts can be presented in text or graphic format. Those requirements and concepts include, but are not limited to, quantity, size, specification model, capacity, configuration, finish, function, and type of material. The Final Designer(s) is responsible for providing details consistent with the requirements or concepts in the final design documents.

Level 3: The Consultant is required to provide a final design with full details of the work. This design will be incorporated into the final design documents. Level 3 design drawings and calculations shall be signed by and stamped, when required, with the seal of a Professional Engineer or Architect, registered to practice in the jurisdiction in which the construction will be performed and under whose direction the design was developed.

4.1.4 Operational Considerations

a. Based on the DCRTP operating plans developed by the WMATA Department of Operations Planning, the Consultant will develop designs to insure that phased construction of the Project will meet the requirements for train consist ranges, maintenance and storage of trains, track connections to the existing railroad, non-revenue tracks, crossovers, turn-backs and tail tracks, train operations and central control connections, fault responses, and other operational coverage. Designs are to be consistent with the design criteria for the Metrorail system provided to the Consultant.

b. The Consultant will participate with WMATA in their evaluation of the operations and maintenance impacts of the recommended design. The WMATA Preliminary Engineering Manager will be responsible for obtaining concurrence from other WMATA offices on the operational basis for the Project design.

4.1.5 Standards and Design Criteria Review

The Consultant will identify and provide justification for any deviations from WMATA's design standards and criteria. Deviations from WMATA standards and criteria will require prior approval by WMATA in accordance with its established procedures before being incorporated into the design. The Consultant will also identify and prepare justification for any deviation(s) from MWAA or VDOT design standards and criteria. Any deviations would require approval from MWAA or VDOT prior to incorporation into Preliminary Engineering plans.

4.1.6 Specifications

The Consultant will prepare the General Provisions, General Requirements, and Technical Specifications required for the Project's design-build contract package(s). WMATA's standard specifications will be reviewed and: 1) invoked, 2) invoked with modifications, or 3) new sections necessary to provide requirements for all elements of the Project will be created. For roadway improvements or modifications, MWAA and VDOT standard specifications, as applicable, will be utilized.

4.2 Civil

The Consultant will perform preliminary civil design, including the preparation of drawings, specifications, reports, and calculations as specified in the following subsections. The Consultant will also coordinate civil design with all other disciplines involved in the design process and resolve conflicts between disciplines.

4.2.1 Survey Controls and Alignment

a. Field check topographic mapping for adequate coverage, completeness and accuracy. Development of additional topographic mapping, using the same specifications as were used for the existing DCRTP mapping, will be limited to the following areas:

   - Y-15 Yard Site, including LPA lead track locations, on Dulles Airport property.
   - Route 28 Station for areas not covered by existing mapping.
   - Reston Parkway Station for areas not covered by existing mapping.
   - Dulles Greenway between Route 28 and Route 772
   - Route 606 Station for areas not covered by existing mapping.
   - Route 772 Station for areas not covered by existing mapping.
   - Wiehle Avenue Station for areas not covered by existing mapping.

b. Perform additional surveys to ensure that the mapping for the Project represents "existing" conditions including top of rail elevations at 50 foot intervals along the existing outbound and inbound Orange Line tracks from 500 feet inbound of the proposed reconstruction of the Orange Line to 500 feet outbound of the west end of the West Falls Church Station platform, and at Yard service tracks sufficient to determine the as-built track profiles, and the location of existing transit facilities at the West Falls Church Rail Yard, (including the area proposed for the car wash relocation), for interfaces with this Project. All survey work will be done in accordance with WMATA's Technical Specification and Requirements for Survey Services. All existing structures requiring reconstruction or located in the construction zone will be field surveyed and tied to the survey baseline. All survey personnel assigned to work on active rail lines must have successfully completed WMATA's Right-of-Way Training.

c. Define the horizontal and vertical controls that are to be used in developing the final mathematized alignment.

d. Prepare the mathematized horizontal and vertical alignment for all proposed trackways and illustrate the mathematized alignments on the controlled topographic base mapping.

e. Show trackway stationing, horizontal dimensions between trackway centerlines, top-of-rail elevations, and any other points which restrain track alignment including points of switch for special track-work, tangent-to-spiral and spiral-to-tangent points, spiral-to-curve and curve-to-spiral points and points at the end of platforms.

f. Plot the limits of transit structures and any added clearances for construction activities including clearances required for heavy equipment to be used during construction, safety and other separation requirements and use this Project footprint to make adjustments in the horizontal alignment, if necessary. Similarly, identify constraints on the final vertical alignment including special trackwork locations, minimum overhead clearances at crossings of highways, roads, railroads, overhead utilities, structural bridge deck requirements and criteria limitations on maximum and minimum profile grades and vertical curve standards.

g. Provide a curve table of coordinate values for horizontal alignment data including all curve and spiral data.

h. Provide field survey location and ties to existing horizontal control for the wetland points included in the US Army Corps of Engineers jurisdictional determination for DCRTP.

i. Stake the field survey locations and develop the ties to existing Project horizontal control for new geotechnical borings.

4.2.2 Right-of-Way

The Consultant will perform the following preliminary right-of-way activities. This task will conform to the current VDOT Manual of Instruction – Right-of-Way Acquisition.

a. Identify properties to be acquired for construction of the DCRTP. The list of affected properties should incorporate right-of-way requirements due to constructability considerations such as access of heavy equipment and construction contractor lay down areas.

b. Compile the deed information collected as part of the Development Scope in the established CADD platform by entering deed calls for each parcel on Project mapping.

c. Review parcel data to visually identify gaps and overlaps of the parcel deed lines. Perform preliminary fieldwork to initially resolve parcel gaps and overlaps. Final resolution of gaps and overlaps to be conducted as specified in the Development Scope of Work.

d. Identify whole takings, partial acquisitions, construction access and permanent easements requiring relocation of businesses or residents. Identify structures to be demolished.

e. Prepare drawings that delineate temporary and permanent easements to support construction operations, access, staging, traffic maintenance, drainage or slopes, utility access, fencing, field office or other limited access rights or requirements.

f. Receive existing utility rights documentation collected as part of the Development Scope of Work and plot the information on utility composite plan sheets using the Project mapping.

g. Identify all buildings, structures and any other facilities that will be demolished, affected or that require underpinning as a result of construction of the guideway, stations and other Project elements along the proposed alignment.

h. Perform field surveys to confirm property location and boundaries. Prepare topographic maps that locate all structures such as tree lines, fences, outbuildings, easements, roads, driveways, houses and other pertinent features.

4.2.3 Geotechnical

a. Review the *Preliminary Geotechnical Investigation Final Report* (September 2001) prepared for the NEPA process.

b. Examine all available soil samples, boring logs and laboratory test data previously obtained for NEPA process.

c. Develop a supplemental soil boring and lab-testing program, including additional borings, water sampling and lab tests necessary to support the Preliminary Engineering effort. Obtain the approval of the Preliminary Engineering Manager before proceeding with the soil borings program. Soil borings must be conducted under the full time supervision of an experienced geologist or geotechnical engineer with professional registration in the Commonwealth of Virginia.

d. Consolidate the Preliminary Engineering and NEPA geotechnical information and prepare a Geotechnical Report that includes a subsurface investigation report, recommendations for foundation design, construction specifications, and boring log and soil profile drawings. The Geotechnical Report will be labeled "information for guidance" and will not be a signed and sealed document.

e. Recommend an instrumentation program for field observation and measurement of movement in order to monitor certain critical phases of Project construction (such as support of excavation). Implement instrumentation program after approval from the Preliminary Engineering Manager.

f. Provide the criteria to be inserted into the Preliminary Engineering Plans entitled "LATERAL PRESSURES FOR DESIGN OF TEMPORARY EARTH RESTRAINING STRUCTURES." Transmit these criteria with back-up data to the WMATA Preliminary Engineering Manager for review and comment.

g. All boring log and soil profile drawings shall bear the Professional Engineer's seal from the geotechnical engineer supervising the work. The geotechnical engineer supervising the work must be a registered Professional Engineer in the Commonwealth of Virginia.

4.2.4 Utilities

a. Gather, using the following methods, sufficient information to ascertain and determine the location, size, depth, details, approximate dates of construction, materials used for the construction, type of joints, and present condition of all underground, surface, and overhead utility installations within or crossing the proposed right-of-way for the Project:

- Perform field reviews to collect above ground information on possible utilities/agency owners.

  - Contact existing utility/agency owners and maintenance offices within Project limits from known companies to secure as-built records, record drawings, shop drawings and permit drawings.

b. Identify utilities that potentially conflict with the Project. If the Consultant determines that test pits are required for verification of utilities locations in critical areas, the Consultant will prepare a cost proposal for the test pit program. The proposal will be submitted to DRPT for approval as specified in the Development Scope.

c. Delineate all existing major utilities on composite base plans.

d. Identify those utilities efforts to be set out as separate advance utility relocation contracts and/or force account projects for the utility organizations.

e. Provide input to support a Utilities Report to be prepared under the Development Scope of Work. This report will identify critical utilities issues, existing utilities locations preliminary utilities relocation design, drawings, abandonment or removal provisions, and a cost estimate for utilities-related work. This report will contain a relocation plan, a determination of critical path items, and enlarged cross section details of utility relocations. The report will also assess the impact on construction cost and schedule by utilizing separate advance utility contracts.

4.2.5 Storm Water Management and Drainage Design

a. Coordinate with the Metropolitan Washington Airports Authority (MWAA) and the Virginia Department of Transportation (VDOT) on the Dulles Airport Access Highway (DAAH) roadway expansion plans, and with TRIP II on Dulles Greenway expansion plans.

b. Analyze the effects of the Project and the roadway expansion plans on storm water runoff and its potential overload of the existing storm water management facilities.

c. Develop a supplemental soil boring and testing program for the determination of groundwater levels at locations of proposed new storm water management facilities or for facilities to be modified and prepare a preliminary Level 2 Design for each of the facilities. The design will include, but not be limited to, surface drainage patterns, pipe layouts with drainage structures and size and profile of drain lines and storm water management ponds.

d. Prepare a Storm Water Management and Drainage Design Report describing pre-existing and post-construction conditions and documenting the rationale for providing detention and/or retention of storm water.

4.2.6 Roadway Alignments, Access Roads, Parking Lots and Pavement Restoration

a. Prepare a Level 2 Design of the following:

  - Permanent and temporary roadway alignments and detours.
  - DAAH, Dulles Toll Road, and Dulles Greenway realignments.
  - Access roads to traction power substations, tie-breaker stations, remote train control rooms, fan and vent shafts, storm water management facilities, and Storage & Inspection Yard.

- Station and parking structure access roads, station parking lots, bus loading bays, and other pedestrian, bicycle, motorcycle, automobile, and bus facilities.
- Alignment and pavement details for VDOT owned and maintained roadways modified as part of the Project.
- Typical pavement restoration details for affected roadways and parking lots.

b. All roadway designs will be coordinated with MWAA and VDOT, as appropriate, to ensure compliance with applicable design standards and facilitate approval of required permits.

4.2.7 Traffic Analysis and Maintenance of Traffic

a. Coordinate with MWAA, VDOT, TRIP II and local jurisdictions to identify traffic requirements at those locations where construction of the Project may cause interference or interruption to vehicle and pedestrian traffic or affect access to public and private properties.

b. Develop basic concepts for maintenance of traffic and prepare preliminary traffic detour plans required for Project construction. Coordinate maintenance of traffic plans with appropriate agencies and local jurisdictions.

c. Review detailed traffic analyses prepared as part of the NEPA process. Update analyses, as required, to support the design of internal station site circulation and required roadway modifications.

d. Prepare Preliminary Maintenance of Traffic Report that discusses locations where construction of the Project will require detours and outlines proposed measures to maintain vehicle traffic, pedestrian movements, and property access.

4.2.8 Construction and Design-Build Coordination

a. Develop a constructability program to be executed during Preliminary Engineering. Experienced construction personnel will be integrated into the Project team from commencement of the design process to assess constructability, work methodology, and material selection. This effort will include a review of the WMATA standards and criteria. The constructability program should be aimed at identifying cost and schedule savings and reducing construction risks during implementation.

b. Prepare a Constructability Report that lays out how physical construction will progress, from site preparation to utilities treatment, traffic management, grading and drainage, in-ground work, and above-ground work. This report will identify the preliminary definition of construction easements and staging areas, access points and interface areas between construction disciplines and third parties. The Constructability Report will identify the most effective way to package the work into manageable and logical segments. Specific emphasis will be placed on identifying construction packages that could be released early in the design-build phase.

c. Develop preliminary construction coordination and sequencing plans, schedules, and drawings demonstrating how each phase of construction will be executed. The plans will include proposed staging areas for construction support services and facilities, construction material and equipment storage yards, rail welding and installation staging areas, and temporary utilities.

d. Prepare concepts that show workable schemes for construction that will minimize the impact on existing airport, Metrorail or roadway operations for the following segments of the DCRTP:

  - Realignment of existing Orange Line tracks to accommodate the Dulles extension tie-in.
  - Tysons Corner area.
  - DAAH and Dulles Toll Road realignment.
  - Reston and Herndon area.
  - Dulles Greenway re-alignment.
  - Work on Dulles Airport property.
  - Accommodations for construction of a future station at Wolf Trap Farm Park during rail operations.
  - Modifications to the existing West Falls Church Yard including a new lead track connection and provisions for a stand-alone car wash facility.

4.2.9 Track Alignment Plan and Profile

a. Design the track alignment plan and profiles for the following:

  - Inbound and outbound tracks from the junction with the existing Orange Line to the proposed Route 772 Station in Loudoun County.
  - The Y15 Storage and Inspection Yard track leads and yard storage tracks.
  - New storage tracks to accommodate a portion of the Dulles fleet (26 cars) at the West Falls Church Yard.
  - Realignment of the existing Orange Line tracks at the junction with the Dulles extension between the East and West Falls Church Stations.
  - Pocket tracks, tail tracks, lead tracks and maintenance tracks at the proposed locations shown on the General Plans.
  - Crossovers and turnouts at the proposed locations shown on the General Plans.

b. Prepare cross sections of the proposed construction and structures at several locations that are representative of the lateral relationship of transit facilities and adjacent structures such as streets, highways, railroads, buildings and significant property boundaries. Cross sections should show each passenger station and its major features including station access elements, the location of traction power substations and any other buildings or structures required for the Project.

4.2.10 Other Civil Engineering

Perform Level 2 Design for the following:

- Grading
- Erosion control
- Sediment control
- Demolition plans
- Dewatering systems
- Movement detection and instrumentation

4.2.11 Noise and Vibration Analysis

a. Review existing technical information and analyses on noise and vibration prepared for the Final EIS. Identify and prepare additional studies required to complete Preliminary Engineering designs.

b. Confirm the adequacy of mitigation measures to be integrated into design elements based on the impacts identified in the Final EIS and regulatory criteria. Collect additional field data and perform modeling as required to support Preliminary Engineering activities.

c. Perform acoustical analysis of two underground stations and prepare an Acoustical Analysis Report with recommendations for any acoustical treatments that should be incorporated into the design to reduce the level of train or equipment noise in public areas of the system. Coordinate analysis with the design of the public address system.

d. Determine and define noise and vibration monitoring programs that will be needed during construction to meet regulatory requirements and mitigate community impacts.

4.3 Trackwork Design

The Consultant will perform preliminary trackwork design, including the preparation of drawings, specifications, reports, and calculations as specified below. The Consultant will also coordinate track design with all other disciplines involved in the design process and resolve conflicts between disciplines.

Perform Level 2 Design for the following Metrorail trackwork:

- Running rail consisting of track fastening for direct fixation and ballasted track.
- Guard rail consisting of joints and separation blocks.
- Composite contact rail consisting of rail arrangement, expansion joints, splice joints, end approaches, anchors and insulation, protection coverboard, conduit and cable arrangement and third-rail heating system.
- Special trackwork consisting of crossovers, turnouts, pocket tracks, maintenance equipment storage track, lead tracks, yard storage tracks and trackwork for high rail vehicles.

4.4 Structural

The Consultant will perform preliminary structural design as specified in the following subsections. This design includes calculations and preparation of sketches, drawings, reports and specifications for all structures (including transit line structures at-grade, aerial and in tunnels, stations, bridges, retaining walls, maintenance shop and other building frames). The Consultant will also coordinate structural design with all other disciplines involved in the design process and resolve conflicts between disciplines.

4.4.1 Metrorail Line

a. Develop the Metrorail guideway structural concepts in sufficient detail to establish basic structural systems and dimensions, preliminary sizing of major structural components and acceptable methods of construction and types of materials for the construction.

b. Identify existing structures that are located within the construction influence zone. The Consultant will, where possible, obtain as-built information for the identified existing structures. The Level 2 structural design documentation for all transit line structures will include protection of any identified existing structures within the construction zone.

c. Provide Level 2 Design which demonstrates the concept designs of steel and concrete guideway structures and sequence of construction are reasonable for developing detailed designs for construction and provide systems that are accessible for maintenance. Guideway design will consider aesthetics, capital cost, constructability and Project’s location in developing guideway elements and features.

d. Prepare a Structural Report that includes supporting structural calculations and drawings, cost estimates and recommended structural designs for the Metrorail guideway. This report should address any special design considerations required where the guideway will cross over or under existing roadways (or approved relocations) or future roadways identified in the region’s current Constrained Long-Range Plan or programmed for construction by MWAA, VDOT or local jurisdictions.

4.4.2 Stations and Facilities

Develop structural concepts for stations and facilities to support cost estimates and architectural concepts. Stations will include parking structures, pedestrian bridges and other structural items normally associated with a station. Facilities will include yard and shop facilities, traction power substations, tie-breaker stations, and other ancillary buildings.

Develop structural systems in sufficient detail to establish basic structural systems and dimensions and preliminary sizing of major structural components. Structural designs shall be prepared in accordance with a “modular/prototype” approach.

Preliminary Engineering drawings and reports will include, but not necessarily be limited to, the following:

a. General Structural Notes, Abbreviations and Symbols and Design Loads
In addition to documentation of general structural notes, abbreviations and symbols, provide a summary of considerations that are necessary for the design and installation of the permanent structure (i.e., basis for design), precautions for construction and design requirements for temporary structures.

b. Foundation Systems
Identify foundation design concepts to support development of the detailed design and to serve as basis for cost estimating. Determine requirements for excavation, backfill, spread footings, piles, caissons as well as for underpinning and other permanent protective structures.

c. Floor and Roof Framing Systems
Analyze and document the preliminary design for structural framing systems. Framing plans shall show the plan view of the structure and the arrangement of structural components at designated elevation or floor / roof levels. Section and detail drawings shall be included as required to show the inter-floor relationship of the structural components and to coordinate with architectural elements.

Drawing scales may vary from 1" = 20' - 0" to 1/8" =1'-0" for Plans and Sections, and from 1/4" to 3"=1'-0" for Details.

d. Miscellaneous Elevations, Sections and Details
Elevation drawings shall show the vertical view of the structure and the arrangements of structural components. Section drawings shall be included as required and shall show the structural arrangements at designated locations indicated on the plan or elevation drawings. Detail drawings shall be included as required and shall illustrate in detail a structural arrangement in a particular location taken from plan, elevation or section.

Scales for Elevation drawings may vary from 1" = 20' - 0" to ½" =1'-0", from 1" = 20' - 0" to 1"=1'-0" for Sections and from 1/4" to 3"=1'-0" for Details.

e. Structural Report
Prepare a Structural Report that includes supporting structural calculations and drawings, cost estimates and recommended structural designs for stations and facilities.

4.5 Architectural

The Consultant will perform architectural conceptual and Preliminary Engineering for stations, parking structures, traction power substations, tie-breaker facilities, subway portals, yard and shop facilities and all other auxiliary buildings and structures as specified in the following subsections. The Consultant will also coordinate architectural design with all other disciplines involved in the design process and resolve conflicts between disciplines.

4.5.1 Architectural Design Consultant

The Consultant will select and employ an architectural design consultant (individual or firm) approved by DRPT and WMATA. The architectural consultant will be nationally recognized for design excellence and have experience in the design of transit facilities. The focus of this consultant's efforts is to develop innovative ideas, explore designs for WMATA station facilities, and develop cost-sensitive functional concepts that enhance neighborhood aesthetics and accessibility. The architectural consultant will participate in a design charette and be available throughout Preliminary Engineering for periodic reviews of the evolving designs.

4.5.2 Design Concept Development and Presentations

a. Station Concept Designs

Prepare station and site design concepts, including parking structures and other ancillary structures, as applicable, for five prototypical stations:

- Tysons East – Aerial
- Tysons Central 123 – Retained Fill
- Tysons Central 7 – Below Grade
- Wiehle Avenue – At-Grade
- Dulles Airport – Below Grade

These concepts will depict the station design and the extent and nature of site development, including landscaping, access points, and off-street bus and parking facilities. Concepts will also show relationship to existing neighborhood characteristics, and potential land use within the immediate area of the station and its entrances.

b. Station Design Approach

A standardized approach to elements common within station types (at-grade, and subway prototypes) shall be incorporated to provide unity and minimize costs. The station entrance pavilions and any adjacent bus, Kiss & Ride or park-and-ride facilities may have unique attributes at each station due to site constraints and conditions, and provide an opportunity to reflect the unique character of the neighborhood in which the station exists.

c. Presentations

At a stage in the design development jointly agreed upon by the Consultant, DRPT, and WMATA, the following formal presentations shall be made. These presentations are in addition to regular design and coordination presentations at progress meetings:

- One presentation each to senior staff from selected offices of DRPT, WMATA, and partner agencies.
- One presentation each to WMATA's Board of Directors and the Commonwealth Transportation Board. Presentations will be made jointly by DRPT and WMATA and supported by the Consultant.
- One presentation to each of the local funding jurisdictions (Fairfax County, Loudoun County, Town of Herndon, and MWAA). Presentations will be made jointly by DRPT and WMATA, and supported by the Consultant.
- Support for a presentation to the Virginia State Historic Preservation Officer (SHPO) and the National Capital Planning Commission may be required for the Dulles Airport station.

d. Presentation Materials

The following presentation materials will be developed for each station:

- Rendered site plan, scale to be determined
- Floor plans, 1/16" = 1'- 0”
- Longitudinal section, 1/16" = 1'- 0"
- Transverse Section(s), 1/8" = 1'- 0"
- Exterior elevations, 1/16" = 1'- 0"

- Exterior photographic simulation and interior perspective rendering(s) - minimum of one exterior and one interior view per station - with views as agreed to by WMATA.
- Materials board(s)

With the exception of the rendered site plan and the exterior photographic simulation, presentation material such as the material boards, may serve the requirements for more than one station if there are no significant differences between the stations.

For each yard and shop facility, the presentation material will be an exterior photographic simulation. For other facilities prototype designs, such as traction power substations, and tie-breaker facilities, portals and aerial guideways, the presentation material shall be an exterior photographic simulation and representative elevation(s) or other such presentation material as may be required to communicate the design concepts.

e. Architectural Scale Models
Engage and coordinate the services of a specialty consultant to prepare architectural models of four stations. The stations, which must be confirmed prior to proceeding with this task are: one Tysons Corner station (Tysons Central 123 Station), one DAAH station (Wiehle Avenue Station), the Dulles Airport station, and one Loudoun station (Route 606 Station). The scale and extent of models shall be sufficient to show all station parking facilities, entrances and connecting passageways associated with the station.

4.5.3 Fire/Life Safety Analysis

a. The Consultant will employ an independent Fire/Life Safety consultant that has significant experience with rail transit projects to perform a review and analysis of Project compliance with fire life/safety requirements of NFPA 130, NFPA 101, other applicable codes, and WMATA design criteria. The analysis shall include exiting calculations to verify compliance with NFPA 130 exiting requirements.

b. The Fire/Life Safety consultant will prepare a Fire/Life Safety Report that will identify compliance requirements and confirm that the Project design complies with these requirements.

4.5.4 Accessibility Compliance Report

a. Review Preliminary Engineering documents and prepare Accessibility Compliance Report that certifies Project compliance with 28 CFR Part 36, *ADA Standards for Accessible Design, Appendix A - ADA Accessibility Guidelines for Buildings and Facilities*, and with all other accessibility requirements from applicable local codes and the WMATA design criteria.

4.5.5 Arts-in-Transit Program

a. Coordinate with DRPT and WMATA to identify possible arts-in-transit opportunities and make recommendations regarding appropriate sites for art installations. Incorporate design requirements needed to support installation of art exhibits in Preliminary Engineering plans and specifications. Artist selection, and other arts administration activities will be undertaken by WMATA in accordance with the policies of its Art in Transit Program and in coordination with any similar policies developed and adopted by DRPT.

4.5.6 Yard & Shop Facilities Program

a. Working with WMATA, and building on requirements documented in the *Facilities Design Report* (June 2002), the Consultant will prepare a Yard & Shop Program Report describing spatial and major equipment program requirements for yard & shop facilities at Site Y15 and improvements at the existing West Falls Church and New Carrollton service and inspection facilities.

4.5.7 Architectural Drawings

Prepare Preliminary Engineering architectural drawings that include, but are not limited to the following:

a. General Architectural Notes, Abbreviations and Symbols
Drawing containing notes, symbols, and abbreviations that pertain in general to Architectural design.

b. Site Plans
The location and boundaries of the station site will be set forth. In addition, the plans shall indicate the proposed station configuration including, but not limited to, remote entrance facilities and pedestrian bridges, connections to existing roads, sidewalks, or trails, and all bus, bicycle, motorcycle, automobile and associated vehicular facilities, parking structure, canopies, and ancillary/support facilities.

Scales: Scale for these plans will be 1"=100' to show the overall site. 1"= 20' or 1"=40' scale shall be used when required for partial plans to show more detail.

c. Floor Plans
Floor plans will show the arrangement of all spaces at each level including, but not limited to, emergency exit corridors and stairs, all means of vertical circulation, and major vertical shafts for intake, exhaust and system/utility runs for the station and all ancillary rooms.

For station plans, all major equipment and furnishings (including escalators, elevators, fare vending and exit fare machines, fare gates, station manager’s kiosk, benches and windscreens, station area map, telephone at mezzanines including TDD and dioramas, trash receptacles, etc.) will be located and queue requirements (as applicable) shown.

All required dimensions, room names and numbers, and references to enlarged and/or standard details will be indicated for all spaces.

Parking structure floor plans will also indicate the arrangement of vehicular access points and controls/revenue collection, location(s) for accessible parking spaces, and ramping and circulation for vehicles and pedestrians.

Scales: The scale of floor plans will be 1" = 20' - 0" for overall plans and 1/8"=1'-0" for partial plans as required.

d. Roof Plans
Roof plans shall show direction(s) of slope(s), access walkways, material callouts, and other features and necessary information including relevant dimensions and detail references.

Scales: The scales of roof plans will be 1" = 20' - 0" or 1/8"=1'-0".

e. Paving Plans
Paving plans will be provided for stations as required for clarification of extent and types of floor finishes for all public areas and occupied staff areas. Indicate working points for layout and references to enlarged and/or standard details.

Scales: The scales of paving plans will be 1" = 20' - 0" or 1/8"=1'-0".

f. Longitudinal and Transverse Sections
Longitudinal and transverse sections will be at locations needed to depict the entire facility design.

For stations, these sections will show platforms, entrances, mezzanines and all other features, and shall delineate relationships to adjacent facilities such as roadways, rail tracks, parking and other structures. All equipment, signage and graphics, lighting, furnishings and exposed major mechanical and electrical systems in public areas or occupied staff areas shall be shown. Finished vertical dimensions, and floor-to-floor dimensions and references to enlarged and/or standard details shall be indicated for all areas.

Scales: The scales of section drawings will be 1" = 20' - 0" or 1/8"=1'-0".

g. Exterior Elevations
Exterior elevations will show primary exterior views of the facility, complete with relevant vertical dimensions, material callouts, detail references, and other necessary information.

Scales: The scales of exterior elevations will be 1" = 20' - 0", 1/8"=1'-0" or 1/4"=1'-0" as appropriate to show the information.

h. Reflected Ceiling Plans
Reflected ceiling plans will be provided for each level of all interior and exterior public areas of stations, and for representative areas of maintenance shop facilities. Typical locations for signage and graphics, lighting, furnishings and exposed major mechanical and electrical systems shall be located.

Finished dimensions including ceiling heights, and references to enlarged and/or standard details will be indicated.

Scales: The scales of reflected ceiling plans will be 1" = 20' - 0", 1/8"=1'-0" or 1/4"=1'-0" as appropriate to show the information.

i. Interior Elevations
Interior elevations will be provided for stations as required to show relevant dimensions, material callouts, and other necessary information, which cannot be accurately or clearly defined, by plans or sections.

Typical locations for signage and graphics, lighting, furnishings and fixtures will be located, and their required clearances and mounting heights (as applicable) will be shown.

Scales: The scales of interior elevations will be 1" = 20' - 0", 1/8"=1'-0" or 1/4"=1'- 0" as appropriate to show the information.

j. Detail Plans, Sections and Elevations
Detail plans, sections and elevations will be shown at scales appropriate to the information to be presented and will include relevant dimensions, callouts, and other information needed.

Detail elevations, plans and sections will be as required to thoroughly document the design intent and to coordinate layouts for station elements such as fare equipment, elevator(s), escalator(s), stairs and station manager's kiosk.

Scales: The scales of be used for detail plans, elevations and sections will be 1/4"=1'-0" or ½"=1'-0".

k. Details
Details will be included, if required, to clearly depict the facility design intent and will include all relevant dimensions, material callouts, and other detailed information.

Scales: The scales to be used for detail drawings will be 1"=1-0", 1-1/2"=1'-0", 3"=1'-0", half size or full size as appropriate.

l. Station Public Signage
Indicate how signage is to be integrated into station architecture. WMATA will define fonts, sizes and colors to be used on signs. Detailed messaging, and overall signage plans are excluded from this task.

m. Finish and Door Schedules
Finish and door schedules will be provided to establish Project requirements.

n. Yard & Shop Facilities
The Consultant will provide plans, building sections and elevations of yard & shop facilities in accordance with the drawing requirements set forth under items (a), (b), (c), (d), (f), (g), and (h) above. Criteria, drawings or preliminary schedules indicating major equipment and room finish requirements will be provided as required to document design intent and support a capital cost estimate.

4.6 Landscaping

The Consultant will perform preliminary landscape master plan concept design including preparation of drawings, specifications, and reports for landscape planting and irrigation systems as specified in the following subsections. This design will define where landscaping is needed, the type of landscaping required and anticipated needs to repair and restore existing planting after completion of construction. The Consultant will also coordinate landscape design with all other disciplines involved in the design process and resolve conflicts between disciplines. All Project landscaping should conform to Fairfax County and Loudoun County urban design requirements specified each county's respective Comprehensive Plan.

4.6.1 Metrorail Line

Develop landscaping concepts for typical line areas including areas under aerial structures and any other areas that require landscaping according to WMATA and applicable MWAA or VDOT criteria. Landscaping features should be identified, plans shall show boundaries of where landscaping is needed, the type of landscaping required and anticipated needs to repair and restore existing planting after completion of construction. Overall plans should be prepared at 1"=100'.

4.6.2 Stations and Facilities

Develop landscaping concepts for stations and facilities in support of architectural concepts. Preliminary Engineering drawings will include, but not necessarily be limited to, the following:

a. General Landscaping Notes, Abbreviations and Symbols
Drawing containing notes, symbols, and abbreviations that pertain to landscaping.

b. Layout Drawings
Landscape layout plans will be based upon civil drawings. These base plans shall then show areas enlarged for clarity, special paving, benches, fences, bollards, other furniture, and detail references.

c. Planting Drawings
Planting concept plans will indicate the areas to be planted. Plans will show typical locations for trees, shrub and ground cover spacing, and lawn areas. Plants will be called by typical botanical name and the size of each type will be shown as well as detail references.

d. Plant Schedule
A schedule will be prepared listing plants with description of types and sizes.

4.7 Mechanical

The Consultant will perform mechanical design including location of major mechanical equipment used for ventilation during an emergency and during normal operation, elevators and escalators at stations and in other facilities, location and size of sump pumps, enlarged plan and elevations of mechanical equipment rooms, airflow diagrams, one line diagrams, all sprinkler and fire department connections, domestic water needs at stations and sources of water, equipment physical size, CFM, weight and HP rating. Provide calculations and prepare drawings, reports and specifications for mechanical systems. The Consultant will also coordinate mechanical design with all other disciplines involved in the design process and resolve conflicts between disciplines.

4.7.1 Metrorail Line

Perform Level 2 Design for all mechanical items within the transit line and service and inspection yards. Preliminary Engineering drawings will include, but are not limited to the following:

a. General Mechanical Notes, Abbreviations and Symbols
Drawing containing notes, symbols, and abbreviations that pertain to mechanical engineering as may be unique to the line.

b. Mechanical Equipment Performance Requirements
Drawings defining general mechanical equipment performance requirements and approximate equipment quantities. Final detailed equipment schedules will be developed by the Design-Build contractor.

c. Track Drainage
Drawings showing typical track drainage concepts for selected line segments.

d. Tunnel Ventilation
Drawings illustrating ventilation concepts; system configurations; approximate fan and damper quantities; and emergency egress requirements and exit hatch details for tunnel sections adjacent to Tysons Central 7 and Dulles Airport Stations. The Consultant will also perform preliminary computer simulations covering ventilation requirements for the tunnel sections adjacent to Tysons Central 7 and Dulles Airport Stations and document the results in a Smoke Management Report.

e. Fire Suppression and Protection
Drawings schematically depicting fire suppression systems for tunnel sections adjacent to Tysons Central 7 and Dulles Airport Stations.

f. Pumping Station/ Water Treatment
Drawings schematically depicting pumping station layouts and the acid neutralization system, where required

4.7.2 Stations and Facilities

Develop mechanical system concepts for stations and facilities in support of architectural concepts. Mechanical designs will be prepared in accordance with the “modular/prototype” approach for the following items:

- Tysons Central 7 station.
- Dulles Airport station.
- Prototype Aerial station.
- Prototype At-Grade station.
- Typical Parking Structure.
- Yard Vehicle Storage Building.

- Yard Operations Building.
- Yard Service and Inspection Shop.
- Yard Car Wash Building.
- Line and Yard Traction Power Substations.
- West Fall Church Service and Inspection Yard existing building modifications.

Preliminary Engineering drawings will include, but not necessarily be limited to, the following:

a. General Mechanical Notes, Abbreviations and Symbols
A drawing containing notes, symbols, and abbreviations that pertain to mechanical engineering as may be unique to stations and facilities.

b. Plumbing and Drainage Riser Diagrams
Schematic diagrams of station and facility plumbing and drainage piping systems showing sequential arrangement of fixtures and devices from distribution point(s) to utility connection points, drawn to an adequate size to show the intent of the design.

c. Plumbing and Drainage Enlarged Plans & Sections
Where required to illustrate design intent and clearance requirements such as schematic drawings covering station Cleaner's Rooms, Sewage Ejector Rooms and Drainage Pumping Stations. Scale to be used will be 1/4"=1'-0".

d. Fire Protection Riser Diagrams
Schematic diagrams of fire protection systems showing sequential arrangement of fixtures and devices for fire protection, drawn to an adequate size to show the intent of the design.

e. HVAC Diagrams
Schematic portrayal of air movement from air-handling equipment to conditioned space or area and its return or dispersal including make-up air and component arrangement drawn to an adequate size to show the intent of the design.

f. HVAC Enlarged Plans and Sections
Where required to illustrate design intent and clearance requirements such as schematic drawings covering underground station Mechanical Rooms, Chiller Plants and Cooling Tower enclosures; prototype aerial and at-grade station ancillary rooms; Mechanical Rooms in the Yard Operations Building, Service and Inspection Building, Car Wash Building and Traction Power Substation; and West Falls Church Yard modifications to the existing buildings. Scale to be used will be 1/4"=1'-0".

4.8 Electrical and Traction Power

The Consultant will perform electrical and systems design including calculations and preparation of drawings, reports and specifications, as specified in the following subsections. The Consultant will also coordinate electrical and traction power design with all other disciplines involved in the design process and resolve conflicts between disciplines.

4.8.1 Metrorail Line

a. Perform Level 2 design for all electrical items within the Transit Line. The electrical work includes, but is not necessarily limited to the following:

- Emergency Trip System (ETS)
- 3rd Rail Schematic to include the following: relationship of 3rd rail and safety walk with respect to track, end approach and gap locations, feeder and jumper cable/conduit quantities.
- 3rd Rail Layouts
- 3rd Rail Heating System to include heat tape and controller locations
- Interface to Data Transmission System (DTS)
- Grounding
- Bonding for utilities and structures
- Stray Current and Cathodic Protection

b. Coordinate with local power companies to obtain information regarding their substation locations, incoming power characteristics, capacity and reliability, and identify concerns or any special efforts needed for the preparation of Master or Special Agreement with the service provider(s). The consultant shall also coordinate the design requirements for stray current and corrosion control of all buried utility structures.

4.8.2 Stations and Facilities

Develop electrical concepts for stations, yards and facilities in support of architectural concepts. Electrical, systems and lighting designs may be prepared in accordance with the "modular/prototype" approach. Preliminary Engineering drawings will include, but not necessarily be limited to, the following:

a. General Notes, Abbreviations and Symbols
A drawing containing notes, symbols, and abbreviations that pertain to electrical engineering as may be unique to stations and facilities.

b. Power Distribution One-Line and Three-Line (Meter and Relay) Diagram
A schematic representation of the electrical power distribution system from both normal and standby sources of supply down to the panelboard level that shows equipment voltage, current and short-circuit ratings, metering, relaying, transformer connections and circuit breaker frame settings.

c. Electrical Service Room Plans
Enlarged switchgear and service room plans and sections showing general equipment arrangements and requirements as required to illustrate design concepts per the criteria.

d. Electrical Equipment Drawings
Electric equipment schedules, plans and diagrams indicating general equipment and routing requirements.

e. Electrical System Equipment

Schematic drawings and general equipment arrangements for the Uninterruptible Power Supply (UPS), Automated Energy Management System (AEMS), Data Transmission System (DTS) and portable generator backup system.

f. Traction Power Facilities
Traction power plans and details showing general layout of equipment for substations located at passenger stations and along the Metrorail alignment. WMATA has prepared an alternative traction power facility configuration report indicating special layouts that could be utilized in locations where space is a problem. The Consultant can refer to this report as needed.

g. West Falls Church Yard Modifications
Analyze capacity of existing traction power system in West Falls Church Yard to support modifications and provide recommendations. To support modifications, prepare 3rd rail plans and layouts, 3rd rail heater plans, substation retrofit plans, power and lighting plans, schedules and details.

h. Service and Inspection Yard
Prepare 3rd rail plans and layouts, substation plans and power plans, schedules and details.

i. Typical Parking Structure
Prepare general equipment, power and lighting plans, schedules and details.

j. Interior Lighting Plans (Public Areas)
The lighting plan for the public areas of the station shall provide typical arrangement(s) of fixtures to meet design criteria requirements.

k. Exterior Lighting Plans (Stations)
The lighting plan shall provide typical arrangement of light poles and fixtures, emergency call box stations and illuminated signage to meet the site program and design criteria requirements.

l. Lighting Fixture Schedule
A lighting fixture schedule shall be prepared for all the lighting fixtures used in public and non-public areas of the station and yard facilities including parking lot and parking structure.

4.9 Automatic Train Control

The Consultant will perform Automatic Train Control systems design, including preparation of drawings and specifications, as specified in the following subsections. The Consultant will also coordinate automatic train control design with all other disciplines involved in the design process and resolve conflicts between disciplines.

4.9.1 Metrorail Line

Perform Level 2 Design for automatic trains control systems items within the transit line. Preliminary Engineering drawings will include, but not necessarily be limited to, the following:

a. Double Line Track Plans

Double line track plans will be developed at a scale of 1" = 100' for the entire line including the yard layout with yard leads and the new track entrance at West Falls Church S&I Yard. These double line track plans will show the locations of points of switches, station platforms, track alignment data consistent with civil design, track stationing equations and type of track construction (ballasted, direct fixation-aerial or direct fixation-tunnel). The double line track plans will also show the planned location of insulated rail joints, signals, switch machines, marker coils, snow melter control cases and negative return crossbonding. The locations of wayside facilities with which the ATC system must interface will be shown, consistent with civil/structural designs, to include remote train control rooms, traction power substations and tiebreaker stations, tunnel drainage pumping stations and jet fan control rooms. The limits of required right-of-way intrusion detection and warning systems will be shown. Impedance bond locations will be shown but will be subject to adjustment to achieve the headway objectives imposed on the Design-/Builder's block design.

b. Train Control Room Prototype Designs

Representative examples of Train Control Room designs will be prepared for five train control rooms. (1) Station TCR with no interlocking. (2) Station TCR with double crossover interlocking. (3) Station TCR with pocket track interlocking. (4) Remote TCR with double crossover interlocking. (5) Terminal station TCR with turnback interlocking. The drawings and supporting specifications will permit the Design-/Builder to offer design alternatives within the constraints permitted by WMATA. Relay logic equivalents will be shown for functions to be performed by vital and non-vital processors. The documents will show the circuits and equipment to satisfy the requirements for Automatic Train Protection, (ATP), Automatic Train Operations (ATO), Automatic Train Supervision (ATS), Data Transmission System (DTS), Train-to-Wayside Communications (TWC), Maintenance Telephone System, Intrusion Detection and Warning (IDW) System and the Advance Warning Systems (AWS). All or part of the above systems can be possible candidates for the integration and design into a Communications Based Train Control System.

c. Train Control Room Equipment Room Layouts

A layout of equipment will be developed for each planned Remote Train Control room to confirm the planned room sizes are adequate.

d. Typical and Reference Drawings

Typical details will be incorporated into the design to illustrate wayside equipment (signals, switch machines, marker coils, impedance bonds, junction boxes, etc.) installation in both ballasted and direct fixation trackbed. WMATA furnished reference drawings from previous designs and as-built documents for similar applications will be provided for mainline route junctions, yard interlocking and signal control requirements. Specifications will address updated equipment changes required to be incorporated in this contract and will also address design alternatives permitted by WMATA.

e. Line Wayside Ductbank and Conduit Requirements

Plans will be developed to show the wayside ductbank requirements for train control and communications cabling for the entire line and tie-in with the yard, passenger stations, wayside facilities and the Orange Line. These plans will be diagrammatic and identify the locations of essential conduit distribution manholes. The plans will also indicate the cableway requirements on aerial structures and in tunnel areas. The diagrams will be supported with typical details showing conduit requirements for interlockings, impedance bonds and other wayside facilities. Existing WMATA Standard and Design Drawing will be incorporated by reference. The Design-Builder will be responsible for developing Project-specific construction plans for the wayside ductbank and conduit requirements.

f. Yard Wayside Ductbank and Conduit Requirements
The Yard Signaling and Communications ductbank requirements will be shown diagrammatically with ductbank sizes between yard buildings identified and conduit requirements indicated for typical wayside equipment such as talk-back speakers, switch machines, signals, track circuits and snow melter control cases. The Design-Builder will develop Project-specific plans for yard ductbank and surface trench construction. Modifications and additions to existing West Falls Church Yard ductbank systems will be identified to support the new connection track.

g. Communication Based Train Control
Develop performance requirements and typical equipment layouts to the Level 1 Design for Communications Based Train Control (CBTC) System application on the Project to allow the Design-Builder to propose on a contract option for providing CBTC as an alternative to a fixed-block Train Control System.

4.9.2 Stations and Facilities

Develop and establish Level 2 Design of the functional requirements for Station and Facilities automatic train control system components including:

a. General Notes, Abbreviations and Symbols
This drawing contains notes, symbols, and abbreviations that pertain to train control.

b. Train Control Riser Diagrams
Develop Train Control riser diagrams for the prototype stations to identify the conduit requirements between the right-of-way and the station train control equipment room.

c. Equipment Layout and Arrangement Plans
A layout of equipment in the prototype station Train Control Rooms will be developed to confirm the rooms are adequately sized.

d. Remote Operation Control Systems (ROCS), Operation Control Center (OCC) and Alternative OCC
The Consultant must provide design documentation that facilitates interfaces of field systems equipment to the ROCS, OCC and alternative OCC.

4.10 Communications Systems

The Consultant will perform communications systems design, including preparation of drawings and specifications, as specified in the following subsections. The Consultant will also coordinate communications systems design with all other disciplines involved in the design process and resolve conflicts between disciplines.

4.10.1 Metrorail Line

a. Line Communications Systems
Project-wide communications facilities to include remote facility Fire and Intrusion Alarm, PABX telephones, Emergency Trip Station telephones, Carrier Transmission System/Fiber Optic Cable System and Mobile Radio for tunnel sections will be shown on line drawings. The communications systems for the yard and yard buildings will be shown in similar detail to that shown for passenger stations to cover telephone, Public Address/wayside talk-back systems, Mobile Radio, CCTV and Fire and Intrusion Alarm requirements.

b. Supervisory Control and Data Acquisition (SCADA)
Plans and specifications will be developed to identify the SCADA/Data Transmission functions for typical facilities to include Train Control Rooms, Traction Power Substations and Tiebreaker Stations, Tunnel Jet Fan Control Rooms, Drainage Pumping Stations and Station facilities to include AC Power and HVAC as well as Fire and Intrusion Alarm transmission to Rail OCC. Typical interfaces between the Train Control, Communications, Traction Power, Station Electrical and Mechanical systems will be shown. The Design-Builder will be responsible for applying the typical requirements to Project facilities and required interfaces at the Rail OCC and the alternate OCC.

c. Yard Communications Systems
The communications systems for the yard and yard buildings will be shown in similar detail to that shown for passenger stations to cover telephone, Public Address/wayside talk-back systems, Mobile Radio, CCTV with DVR's and Fire and Intrusion Alarm requirements.

d. Typical and Reference Drawings
Typical details will be incorporated into the design to illustrate wayside equipment. Specifications will address updated equipment changes required to be incorporated in this contract and will also address design alternatives permitted by WMATA.

e. Line Wayside Ductbank and Conduit Requirements
Plans will be developed to show the wayside ductbank requirements for train control and communications cabling for the entire line and tie-in with the yard, passenger stations, wayside facilities and the Orange Line. These plans will be diagrammatic and identify the locations of essential conduit distribution manholes. The plans will also indicate the cableway requirements on aerial structures and in tunnel areas. The diagrams will be supported with typical details showing conduit requirements for interlockings, impedance bonds and other wayside facilities. Existing WMATA Standard and Design Drawings will be incorporated by reference. The Design-Builder will be responsible for developing Project-specific construction plans for the wayside ductbank and conduit requirements.

f. Yard Wayside Ductbank and Conduit Requirements
The Yard Communications ductbank requirements will be shown diagrammatically with ductbank sizes between yard buildings identified and conduit requirements indicated for typical wayside equipment such as talk-back speakers. The Design-Builder will be responsible for developing Project-specific plans for yard ductbank and surface trench construction.

4.10.2 Stations and Facilities

Develop and establish Level 2 Design of the functional requirements for Station and Facilities communications system components. Preliminary Engineering drawings will include, but not necessarily be limited to, the following:

a. General Notes, Abbreviations and Symbols
This drawing contains notes, symbols, and abbreviations that pertain to train control.

b. Communications Riser Diagrams
Develop Communications riser diagrams for the prototype stations to identify the conduit requirements between the right-of-way and the station Communications Equipment Room.

c. Equipment Layout and Arrangement Plans
A layout of equipment in the prototype station Communications Equipment Rooms will be developed to confirm the rooms are adequately sized.

d. Kiosks
The Kiosks shall be the current standard elongated type and shall be located as shown on Architectural Plans. The kiosk design shall include drawings and specifications for structural, mechanical, electrical and communications interface elements of the kiosks.

e. Station and Garage Communications Systems
Station Communication Systems consisting of Carrier/Fiber Optic Transmission System (CTS), Data Transmission System, Telephone System (TEL), Comprehensive Radio System (CRS), 800 MHZ Public Safety System (PSS), Passenger Emergency Report System (PERS), Closed Circuit Television System (CCTV), Public Address (PA), Passenger Information System (PIDS), Fire/Intrusion Alarm (FIA), Automatic Public Address Announcement System (APAAS), Garage Emergency Telephone System (GETS) and Kiosk control and display equipment.

The Communications system design requirements for prototype stations will include conduit riser diagrams, architectural backgrounds with communications device locations shown and system schematic diagrams. These drawings will show requirements for PABX telephones (normal and emergency) Passenger Emergency Reporting Stations, Automatic Public Address Announcement System, Closed Circuit Television, Public Address, Kiosk Communications, Passenger Information Display System and Fire and Intrusion Alarm System. The requirements for Public Telephones will also be shown.

For parking structures, drawings of conduit riser diagrams and equipment locations will be shown similar to those provided for passenger station areas and will include the Garage Emergency Telephone locations. Equipment installation details and system schematic diagrams will be consistent with WMATA design criteria and standards for passenger station CCTV, PERS, PA and FIA by adapting drawings from retrofit programs currently being implemented. The Conduit Riser Diagrams and equipment location plans will identify the origin, destination and size of conduits. It is assumed that the Consultant will develop conduit routing plans, schedules and details to cover the full conduit run. A layout of equipment in the planned Communications Rooms will be developed to confirm the rooms are adequately sized.

4.11 Automatic Fare Collection Systems

The Consultant will perform automatic fare collection systems design, including preparation of drawings and specifications, as specified in the following subsections. The Consultant will also coordinate automatic fare collection systems design with all other disciplines involved in the design process and resolve conflicts between disciplines.

4.11.1 Stations and Facilities

The Consultant shall develop and establish Level 2 Design of the functional requirements for Station and Facilities system components including:

a. General Notes, Abbreviations and Symbols
This drawing contains notes, symbols, and abbreviations that pertain to train control.

b. Automatic Fare Collection Equipment Ducts
Layout of conduits and underfloor ducts required for power, control and data transmission of Automatic Fare Collection System vending equipment and fare gates shall be developed for the prototype passenger stations.

4.12 Intelligent Transportation Systems

a. The Consultant will conduct decision-based workshop with DRPT, WMATA, and partner agencies to identify and advance consideration of ITS enhancements and special technology initiatives for possible inclusion into the DCRTP.

b. Based on the workshop above, evaluate two alternative ITS systems or applications that warrant further consideration as part of the strategic ITS and technology goals for the corridor. The Consultant will prepare an ITS Applications Report that summarizes the pros, cons and cost-benefits of the recommended ITS applications. This report should include an evaluation matrix, as well as a general description of the basic functional requirements associated with each proposed ITS application.

4.13 Safety and Security

a. The Consultant will evaluate safety and security considerations as part of Preliminary engineering process. This systematic approach to safety and security will identify technical and management strategies for the identification, assessment, prevention and control of hazards associated with transit design, construction and operations, including hazards to transit users, the public at large and transit employees.

b. All Preliminary Engineering designs prepared by the Consultant will meet WMATA's safety and security design criteria and specifications. WMATA is currently developing requirements for an array of enhanced security systems including facility access control, toxic gas detection, perimeter intrusion detection and others for which details and interfaces are not fully defined. If revised safety and security criteria are adopted by WMATA during Preliminary Engineering, designs will be reviewed, and if necessary, modified as an additional task to meet current safety and security requirements.

c. The Consultant will coordinate through the WMATA Preliminary Engineering Manager with the FTA Office of Safety, Transportation Security Administration, MWAA Emergency Services, and the WMATA Police Department to identify additional security measures or systems that may be required for the DCRTP. Additional security requirements will be incorporated into the Preliminary Engineering design.

4.14 Environmental Analysis

The Consultant will conduct environmental analyses as specified in the following subsections and Section 4.2.11. The Consultant will also coordinate these environmental analyses with all other disciplines involved in the design process and resolve conflicts between disciplines. Environmental analysis related to property acquisitions will be conducted as part of the Development Scope of Work.

4.14.1 Contamination Analysis, Materials and Groundwater Management

a. Prepare a Materials Management Plan to establish the proper methodologies and procedures for Project-wide handling, disposal, and/or reuse of the soils and groundwater removed during construction operations. This plan will include:

  - VDEQ soil and groundwater sampling and analysis requirements.
  - Applicable VDEQ screening levels and groundwater standards.
  - Soil and groundwater sampling and analysis plan to characterize subsurface conditions for the entire alignment.
  - Proposed sampling and sample locations.
  - Evaluation of potential groundwater treatment and disposal options.

b. In conjunction with the Geotechnical field investigation, conduct systematic soil testing along the entire alignment to support planning for the materials management program (e.g., soil reuse and disposal) in context of cut, fill, and stockpile locations. Soil testing will include the following activities:

  - Soil sampling, analysis, and evaluation.
  - Identification of the nature and extent of contamination along the alignment.
  - Estimated volumes and assessment of the contaminated nature of material to be excavated.
  - Assessment of exposure, toxicity and risks to human health and ecology.
  - Evaluation of potential on-site soil reuse options.
  - Assessment of potential off-site soil disposal options.
  - Preparation of a Virginia DEQ-required Characterization Report.

c. In conjunction with Geotechnical personnel, conduct alignment-wide groundwater testing and screening to support permitting and planning for de-watering operations. Groundwater testing will include the following activities:

  - Testing in areas of anticipated de-watering, such as tunnel sections.
  - Evaluation of groundwater analytical data.
  - Preparation of a Virginia DEQ-required Characterization Report.

4.14.2 Air Quality

a. Conduct, as required, additional analyses needed to support air emission source permits.

b. Determine and define air quality monitoring programs that will be needed during construction.

4.14.3 Water Quality

a. Conduct analyses and prepare technical documentation needed to support National Pollutant Discharge Elimination System (NPDES) and other permits related to water discharges and impacts.

b. Conduct, as required, additional analyses needed to support other water quality permits.

c. Determine and define water quality monitoring programs that will be needed during construction.

4.14.4 Wetlands, Fish/Wildlife, and Habitats

a. Review field data collected as part of the ongoing NEPA analysis. Collect additional field data on affected wetland sites, stream crossings, and unique habitats as needed to support permitting activities.

b. Advance design of conceptual wetland mitigation plan developed for the Final EIS to support Federal and Virginia permit applications. If necessary, determine additional alternatives for wetland mitigation, including sites and mitigation measures

c. Confirm that Project designs do not affect protected biota or regulated habitats or resources. If necessary, identify options to mitigate impacts in the design and/or construction techniques.

4.14.5 Cultural Resources

a. Review existing archaeological information referenced in or prepared for the Final EIS and evaluate potential conflicts with the proposed design or construction operations. Determine, in consultation with the SHPO, the need for additional Phase I and Phase II archaeological evaluations.

b. Conduct any Phase IB archaeological assessments required by the SHPO.

c. Conduct any Phase II archaeological assessments (excavations) required by the SHPO.

d. Support completion and implementation of the Section 106 Programmatic Agreement.

e. Review historic property/architectural assessments to determine the extent of mitigation, if any, needed to meet the terms of the Programmatic Agreement and satisfy the SHPO.

4.15 Permits

The Consultant will provide engineering and technical support, including operational and safety analyses, for all permitting activities specified in the Development Scope of Work. The Consultant will also prepare the necessary engineering designs, calculations, and supporting documentation for all permit applications and/or local government approvals prepared during Preliminary Engineering.

4.16 Special Tasks, Studies, Presentations

a. During the course of Preliminary Engineering, additional tasks or special studies may be required by DRPT to support project development activities, decision-making or third-party requests. These may include new alignment studies, traffic studies, facility relocation or alternate design evaluations, new design elements requested by local agencies or developers, special cost estimates, special presentations, environmental analyses, system integration analyses or a variety of other tasks identified as the Project progress.

b. The Consultant will include an allowance in the Preliminary Engineering budget for these support activities. Access to this account would be available on a Task Order basis. Once an eligible work task has been identified, the Consultant, DRPT and WMATA will mutually agree to a budgetary price. When instructed by DRPT the Consultant shall commence and complete the agreed upon task order.

4.17 Cost Estimates

a. Prepare a fully loaded Capital Cost Estimate containing all Project soft costs, hard cost unit prices and quantities, and construction costs for design-build contract packages identified in this Scope of Work.

b. Estimates developed by the Consultant will be based on cost-effective design and in accordance with WMATA, MWAA, and VDOT standards and design criteria. The current order-of-magnitude Capital Cost Estimate developed on the basis of the General Plans shall be used as the baseline for the refined estimates developed during Preliminary Engineering.

c. The Consultant shall submit Capital Cost Estimates in current year and year of expenditure dollars to DRPT at the 50% milestone and at the completion of Preliminary Engineering. Major assumptions and detailed supporting data will also be submitted for review. The Consultant shall design to budget and identify high cost project elements for Value Engineering consideration. The initial budget will be based on the SDEIS Capital Cost Estimate or the latest capital cost estimate made available to DTP within 30 days of NTP.

d. The cost estimate format will support phased construction and the anticipated requirements of the Project's Full Funding Grant Agreement application.

4.18 Preliminary Engineering Activities Schedule and Design-Build Implementation Schedule

a. The Consultant will submit a detailed Preliminary Engineering Activities Schedule to DRPT for approval within 120 calendar days after NTP. This schedule will be reviewed by WMATA and partner agencies and approved by DRPT. The approved version will serve as the Baseline Schedule for Preliminary Engineering activities. It will identify all Preliminary Engineering tasks and show completion of all activities for the Phase 1 of the Project in 15 months following NTP for Preliminary Engineering Work and the Phase 2 of the Project in 6 additional months. This schedule should identify planned deliverables and indicate milestones for review and approval.

b. The Consultant will submit at the preliminary and final reviews a Design-Build Implementation Schedule in a time-scaled bar-chart form which shows the principal Design-Build activities and major work items for each construction segment, by stage, with milestones identified. The schedule shall also identify when the various contracts, such as separate advance utility contracts, may begin and end or affect other contractors or agencies. A narrative indicating the concept and/or assumptions used in the schedule shall also be submitted.

4.19 Value Engineering

a. Support an independent Value Engineering review of the Preliminary Engineering design concurrent with the ongoing design work at approximately the 50% milestone of Preliminary Engineering. DRPT will be responsible for selecting and managing the independent Value Engineer.

b. The independent Value Engineering Report providing analysis and recommendations for potential Project cost savings will be reviewed by DRPT, WMATA, and the Consultant for consideration and inclusion in the Project design.

5.0 REVIEW OF THE PRELIMINARY ENGINEERING WORK PRODUCTS

a. Submittals
The Consultant will submit the Preliminary Engineering Plans and Reports in two phases for review:

Submittal	**Timing**
Preliminary Review	50% Milestone
Final Review	95% Milestone

b. Review Procedures

1. The Consultant, DRPT, WMATA, and other reviewers (partner agencies) will meet 30 days in advance of each major review submittal to review the Consultant's design approach, assumptions and work products to be submitted. Disciplines to be reviewed are:
   - Civil (Survey Control, Alignment, Utilities, Geotechnical, Erosion Control, Stormwater Management and Site Design, Roadway Design and Maintenance of Traffic)
   - Architectural
   - Electrical
   - Structural
   - Mechanical
   - Traction Power
   - Train Control
   - Communication
   - Elevator and Escalator
   - Service & Inspection Yard Facilities
   - Operation Control Center

2. The Preliminary Review will be an interactive workshop review between DRPT, WMATA, other reviewers (partner agencies) and the Consultant's design team, extending over a period of up to four days. Twenty-one (21) business days prior to the workshops, status prints of the design documents will be submitted to all reviewers. The goal of the workshops is to provide an efficient transfer of review comments on the design approach being used for Preliminary Engineering. Written questions and responses will be discussed at the workshops and applicable comments will be documented and consolidated for inclusion into the design documents.

3. The Final Review schedule will require DRPT, WMATA, and other reviewers to complete review of the Final Review submittal documents and provide written review comments in fifteen (15) business days after receipt of the submittal documents . The Consultant shall meet with DRPT and WMATA discuss the review comments. Within ten (10) business days after the review conference, the Consultant shall

deliver minutes of the conference with responses to all comments. Responses shall detail the agreed technical modifications required to incorporate the comments.

6.0 DELIVERABLES

a. Major Preliminary Engineering deliverables are listed in Table 1 below. Submittal due dates for these deliverables will be in accordance with the approved schedule for Preliminary Engineering activities. All calculations, working papers, and other data supporting the Preliminary Engineering design will be maintained and included in the Project's Document Control system.

b. A detailed list of drawings to be completed as part of Preliminary Engineering is included as **Attachment B.** The Consultant will adhere to the agreed-upon drawing list and maintain a "Design Control Register" to enable the tracking and monitoring the progress of work and production of these drawings.

Table 1
MAJOR PRELIMINARY ENGINEERING DELIVERABLES

	NUMBER OF COPIES + FORMAT		
Deliverable	**Electronic**	**8½ x 11**	**Half Size**
Preliminary Engineering Activities Schedule	x	30	
Preliminary Engineering Progress Reports and Schedule Updates	x	30	
Design-Build Implementation Schedule	X	30	
Project Execution Plan	x	30	
Quality Assurance/Quality Control Plan	x	30	
Basis of Design Report	X	30	
50% Preliminary Engineering Plans – Phase 1	x		50
50% Preliminary Engineering Specifications and General Conditions – Phase 1	x	50	
50% Preliminary Engineering Capital Cost Estimate – Phase 1	x	30	
95% Preliminary Engineering Plans – Phase 1	x		50
95% Preliminary Engineering Specifications and General Conditions – Phase 1	x	50	
Final Preliminary Engineering Plans – Phase 1	x		50
Final Preliminary Engineering Specifications and General Conditions – Phase 1	x	50	
Final Preliminary Engineering Capital Cost Estimate – Phase 1	x	30	
50% Preliminary Engineering Plans – Phase 2	x		50
50% Preliminary Engineering Specifications and General Conditions – Phase 2	x	50	
50% Preliminary Engineering Capital Cost Estimate – Phase 2	x	30	
95% Preliminary Engineering Plans – Phase 2	x		50
95% Preliminary Engineering Specifications and General Conditions – Phase 2	x	50	
Final Preliminary Engineering Plans – Phase 2	x		50
Final Preliminary Engineering Specifications and General Conditions – Phase 2	x	50	

Deliverable	NUMBER OF COPIES + FORMAT		
	Electronic	8½ x 11	Half Size
Final Preliminary Engineering Capital Cost Estimate – Phase 2	x	30	
Baseline Survey and Topographic Mapping	x		
Geotechnical Report	x	30	
Preliminary Maintenance of Traffic Report	x	30	
Storm Water Management & Drainage Design Report	x	30	
Constructability Report	x	30	
Structural Report	x	30	
Acoustical Analysis Report	x	30	
Smoke Management Report	x	30	
Fire & Life Safety Report	x	30	
Accessibility Compliance Report	x	30	
Yard & Shops Report	x	30	
ITS Applications Report	x	30	
Materials Management Plan	x	30	

Attachment A

Delegation of Authority to WMATA

DRPT recognizes WMATA, as the ultimate owner and entity responsible for operation and maintenance of the completed Project, is a critical partner in the implementation of the Dulles Corridor Rapid Transit Project. In order for WMATA to carry out its responsibilities to its Board, DRPT acknowledges that it must delegate certain authority to WMATA. DRPT is therefore providing WMATA with the following authority to assist DRPT in meeting its obligations under the Comprehensive Agreement and improve the overall delivery of the Project.

1. DRPT hereby appoints WMATA as Technical Manager for Preliminary Engineering with authority to manage the Phase 1 and Phase 2 Preliminary Engineering Work (as such term is defined in the Comprehensive Agreement and hereafter "Scope of Work") on behalf of DRPT in accordance with, and subject to the limitations of this Exhibit and the Comprehensive Agreement (the "Agreement"). Nothing herein is intended to amend or modify the rights of the parties under the Agreement or the rights and obligations of the parties under the Project Management Plan.

2. WMATA's authority as Technical Manager shall include directing the day-to-day efforts of Dulles Transit Partners, LLC (DTP) (together with any other Subcontractors referred to herein as "DTP") on the Scope of Work. Such authority will include, but not be limited to, carrying out DRPT's rights to approve key DTP personnel and staffing levels for the Scope of Work, production and earned value progress payment schedules, qualification of specialty design subcontractors, Quality Control Plan and QA personnel, conducting quality audit reviews and directing correction of non-compliant work, all in accordance with the terms and provisions of the Agreement.

3. WMATA will retain full authority for determining the application of WMATA's criteria and standards, including those relating to rail operations and systems integration, to DTP's design under the Scope of Work and/or DRPT technical work assigned through agreements with third parties that influence the rail systems.

4. WMATA will receive directly correspondence from DTP on technical matters pertaining to the Scope of Work and will respond in writing to DTP. WMATA shall submit copies of all correspondence received from DTP or third parties to DRPT upon receipt. WMATA will provide the opportunity to DRPT representatives to attend all meetings and will simultaneously supply DRPT with copies of all project-related correspondence from WMATA to DTP or third parties. Upon completion of the Scope of Work, WMATA will transfer to DRPT original copies of all correspondence and documentation.

5. The authority delegated to WMATA herein shall be delegated to the CEO and General Manager of WMATA, who may redelegate authority to appropriate WMATA staff to serve as WMATA Project Manager to act on behalf of DRPT in accordance with the Agreement and this Appendix 1. DRPT shall have the right to approve the appointment of the WMATA Project Manager or other key project staff, and the right to require his/her removal and the removal of any key project staff from the Project for due cause. The WMATA Project Manager and all WMATA staff assigned full-time to the Project will be co-located at the Dulles Corridor Rapid Transit Project Office.

6. WMATA will monitor, and keep DRPT fully informed of, DTP's progress under the Scope of Work to ensure that the Scope of Work remains on schedule and within budget. WMATA will review and recommend to DRPT approval or disapproval of progress payments to DTP under the Scope of Work.

7. WMATA will be responsible for conducting all technical reviews and approvals identified in the Scope of Work under the terms and conditions outlined in the Agreement. WMATA will immediately notify DRPT, as well as DTP, if it is unable to meet the review and/or approval time frames set forth in the Agreement and the reason that any extension of time is required.

8. WMATA will represent DRPT in the negotiation of any change orders related to the Scope of Work, including extensions of time, subject to DRPT's written direction. DRPT will retain responsibility to issue actual change orders to DTP in accordance with the Agreement.

9. WMATA is not authorized to take any action without the prior written consent of DRPT that would increase the costs incurred by DRPT under the Agreement, change the schedule, change the Scope of Work or waive or modify the terms and conditions of the Agreement.

10. Subject to the provisions of the Second Agreement, DRPT reserves its right to modify its delegation of authority to WMATA as Technical Manager if DRPT is required to do so in order to avoid a breach of its obligations to DTP as set forth in the Agreement.

Attachment B

Preliminary Engineering Drawing List

Dulles Corridor Project - SOW
Drawing Summary

5/19/04

SOW #	SOW Description	SOW Total
4.2	**Civil**	**1,034**
4.2.1	Survey Controls and Align.	14
4.2.2	Right of Way	146
4.2.3	Geotechnical	38
4.2.4	Utilities	218
4.2.5	Storm Water Man. & Drainage	166
4.2.6	Roadway Alignm,Access Roads ect.	108
4.2.7	Traffic Analysis and Maintenance of Traffic	14
4.2.8	Construction & D/B Coordination	11
4.2.9	Track Alignment Plan and Profile	292
4.2.10	Other Civil Eng.	27
4.3	**Trackwork**	**122**
4.4	**Structural**	**905**
4.4.1	Metrorail Line	559
4.4.2	Stations and Facilities	346
4.5	**Architectural**	**417**
4.5.2	Design Concept	72
4.5.7	Architectural PE	345
4.6	**Landscaping**	**45**
4.6.1	Metrorail Line	16
4.6.2	Stations and Facilities	29
4.7	**Mechanical**	**178**
4.7.1	Metrorail Line	22
4.7.2	Stations and Facilities	156
4.8	**Electrical and Traction Power**	**468**
4.8.1	Metrorail Line	280
4.8.2	Stations and Facilities	188
4.9	**Automatic Train Control**	**355**
4.9.1	Metrorail Line	165
4.9.2	Stations and Facilities	190
4.10	**Communications Systems**	**195**
4.10.1	Metrorail Line	104
4.10.2	Stations and Facilities	91
4.11	**Automatic Fare Collection**	**6**
4.11.1	Stations and Facilities	6
	Total	**3,725**

Note: Drawing counts do not include ST drawings

Dulles Corridor Rapid Transit Project -

Work Breakdown Structure

SOW Paragraph Titles

4.2 Civil
- 4.2.1 Survey Controls & Alignment
- 4.2.2 Right of Way
- 4.2.3 Geotechnical
- 4.2.4 Utilities
- 4.2.5 Storm Water Management & Drainage
- 4.2.6 Roadway Alignment, Access Roads, etc
- 4.2.7 Traffic Analysis and Maint of Traffic
- 4.2.8 Construction & D/B Coordination
- 4.2.9 Track alignment Plan and Profile
- 4.2.10 Other Civil Engineering

4.3 Trackwork

4.4 Structural
- 4.4.1 Metrorail Line
- 4.4.2 Stations and Facilities

4.5 Architectural
- 4.5.2 Design Concept
- 4.5.7 Architectural PE Phase

4.6 Landscaping
- 4.6.1 Metrorail Line
- 4.6.2 Stations and Facilities

4.7 Mechanical
- 4.7.1 Metrorail Line
- 4.7.2 Stations and Facilities

4.8 Electrical and Traction Power
- 4.8.1 Metrorail Line
- 4.8.2 Stations and Facilities

4.9 Automatic Train Control
- 4.9.1 Metrorail Line
- 4.9.2 Stations and Facilities

4.10 Communications
- 4.10.1 Metrorail Line
- 4.10.2 Stations and Facilities

4.11 Automatic Fare Collection
- 4.11.1 Stations and Facilities

Work Breakdown Structure (WBS)

Level 1 - Project Phases
1 Phase 1 (Orange Line to Wiehle)
2 Phase 2 (Wiehle to Airport / Loudoun County)
3 Project Common

Level 2 - Primary Elements
1 ROW
2 Yard & Shop
3 Stations
4 Systems

LVL 1	LVL 2	Discipline	Dwg Group		Drawing Description	Drawing Type	Drawing Count by Group
WBS				SOW Para	DESCRIPTION		
						Design, Diag. or Standard	SOW No.
					ARCHITECTURAL		
					Total		417
					4.5.2 Total		72
					4.5.7 Total		345
1	3	Arch	Tysons East Station	4.5.2	Conceptual Development Drawing	Conceptual	12
1	3	Arch	Tysons East Station	4.5.2	Conceptual Development Drawing	Conceptual	
1	3	Arch	Tysons East Station	4.5.2	Conceptual Development Drawing	Conceptual	
1	3	Arch	Tysons East Station	4.5.2	Conceptual Development Drawing	Conceptual	
1	3	Arch	Tysons East Station	4.5.2	Conceptual Development Drawing	Conceptual	
1	3	Arch	Tysons East Station	4.5.2	Rendered Site Plan	Conceptual	
1	3	Arch	Tysons East Station	4.5.2	Ground Level Floor Plan	Conceptual	
1	3	Arch	Tysons East Station	4.5.2	Mezzanine Level Floor Plan	Conceptual	
1	3	Arch	Tysons East Station	4.5.2	Platform Level Floor Plan	Conceptual	
1	3	Arch	Tysons East Station	4.5.2	Longitudinal Sections	Conceptual	
1	3	Arch	Tysons East Station	4.5.2	Transverse Sections	Conceptual	
1	3	Arch	Tysons East Station	4.5.2	Exterior Elevations	Conceptual	
1	3	Arch	Tysons Central D Station	4.5.2	Conceptual Development Drawing	Conceptual	10
1	3	Arch	Tysons Central D Station	4.5.2	Conceptual Development Drawing	Conceptual	
1	3	Arch	Tysons Central D Station	4.5.2	Conceptual Development Drawing	Conceptual	
1	3	Arch	Tysons Central D Station	4.5.2	Rendered Site Plan	Conceptual	
1	3	Arch	Tysons Central D Station	4.5.2	Ground Level Floor Plan	Conceptual	
1	3	Arch	Tysons Central D Station	4.5.2	Mezzanine Level Floor Plan	Conceptual	
1	3	Arch	Tysons Central D Station	4.5.2	Platform Level Floor Plan	Conceptual	
1	3	Arch	Tysons Central D Station	4.5.2	Longitudinal Sections	Conceptual	
1	3	Arch	Tysons Central D Station	4.5.2	Transverse Sections	Conceptual	
1	3	Arch	Tysons Central D Station	4.5.2	Exterior Elevations	Conceptual	
1	3	Arch	Tysons Central C Station	4.5.2	Conceptual Development Drawing	Conceptual	11
1	3	Arch	Tysons Central C Station	4.5.2	Conceptual Development Drawing	Conceptual	
1	3	Arch	Tysons Central C Station	4.5.2	Conceptual Development Drawing	Conceptual	
1	3	Arch	Tysons Central C Station	4.5.2	Conceptual Development Drawing	Conceptual	
1	3	Arch	Tysons Central C Station	4.5.2	Rendered Site Plan	Conceptual	
1	3	Arch	Tysons Central C Station	4.5.2	Ground Level Floor Plan	Conceptual	
1	3	Arch	Tysons Central C Station	4.5.2	Mezzanine Level Floor Plan	Conceptual	
1	3	Arch	Tysons Central C Station	4.5.2	Platform Level Floor Plan	Conceptual	
1	3	Arch	Tysons Central C Station	4.5.2	Longitudinal Sections	Conceptual	
1	3	Arch	Tysons Central C Station	4.5.2	Transverse Sections	Conceptual	
1	3	Arch	Tysons Central C Station	4.5.2	Exterior Elevations	Conceptual	
1	3	Arch	Wiehle Avenue Station	4.5.2	Conceptual Development Drawing	Conceptual	11
1	3	Arch	Wiehle Avenue Station	4.5.2	Conceptual Development Drawing	Conceptual	
1	3	Arch	Wiehle Avenue Station	4.5.2	Conceptual Development Drawing	Conceptual	
1	3	Arch	Wiehle Avenue Station	4.5.2	Conceptual Development Drawing	Conceptual	
1	3	Arch	Wiehle Avenue Station	4.5.2	Conceptual Development Drawing	Conceptual	
1	3	Arch	Wiehle Avenue Station	4.5.2	Rendered Site Plan	Conceptual	
1	3	Arch	Wiehle Avenue Station	4.5.2	Mezzanine Level Floor Plan	Conceptual	
1	3	Arch	Wiehle Avenue Station	4.5.2	Platform Level Floor Plan	Conceptual	
1	3	Arch	Wiehle Avenue Station	4.5.2	Longitudinal Sections	Conceptual	
1	3	Arch	Wiehle Avenue Station	4.5.2	Transverse Sections	Conceptual	
1	3	Arch	Wiehle Avenue Station	4.5.2	Exterior Elevations	Conceptual	
1	3	Arch	Aerial Guideway Structure	4.5.2	Conceptual Development Drawing	Conceptual	2
1	3	Arch	Aerial Guideway Structure	4.5.2	Conceptual Development Drawing	Conceptual	
1	3	Arch	Tunnel Portal Structure	4.5.2	Conceptual Development Drawing	Conceptual	5
1	3	Arch	Tunnel Portal Structure	4.5.2	Conceptual Development Drawing	Conceptual	
1	3	Arch	Tunnel Portal Structure	4.5.2	Rendered Site Plan	Conceptual	
1	3	Arch	Tunnel Portal Structure	4.5.2	Rail Level Plan	Conceptual	
1	3	Arch	Tunnel Portal Structure	4.5.2	Elevations and Sections	Conceptual	
1	3	Arch	Dulles Airport Station	4.5.2	Conceptual Development Drawing	Conceptual	15
1	3	Arch	Dulles Airport Station	4.5.2	Conceptual Development Drawing	Conceptual	
1	3	Arch	Dulles Airport Station	4.5.2	Conceptual Development Drawing	Conceptual	
1	3	Arch	Dulles Airport Station	4.5.2	Conceptual Development Drawing	Conceptual	
1	3	Arch	Dulles Airport Station	4.5.2	Conceptual Development Drawing	Conceptual	
1	3	Arch	Dulles Airport Station	4.5.2	Rendered Site Plan	Conceptual	

LVL 1	LVL 2	Discipline	Dwg Group		Drawing Description	Drawing Type	Drawing Count by Group
WBS				SOW Para	DESCRIPTION		
						Design, Diag. or Standard	SOW No.
					ARCHITECTURAL		
1	3	Arch	Dulles Airport Station	4.5.2	Ground Level Floor Plan	Conceptual	
1	3	Arch	Dulles Airport Station	4.5.2	Mezzanine Level Floor Plan	Conceptual	
1	3	Arch	Dulles Airport Station	4.5.2	Existing Structure Interface Plan	Conceptual	
1	3	Arch	Dulles Airport Station	4.5.2	Platform Level Floor Plan	Conceptual	
1	3	Arch	Dulles Airport Station	4.5.2	Longitudinal Sections	Conceptual	
1	3	Arch	Dulles Airport Station	4.5.2	Transverse Sections	Conceptual	
1	3	Arch	Dulles Airport Station	4.5.2	Transverse Sections	Conceptual	
1	3	Arch	Dulles Airport Station	4.5.2	Existing Structure Interface Sections	Conceptual	
1	3	Arch	Dulles Airport Station	4.5.2	Exterior Elevations	Conceptual	
1	4	Arch	Traction Power Substation	4.5.2	Conceptual Development Drawing	Conceptual	3
1	4	Arch	Traction Power Substation	4.5.2	Rendered Site Plan - 1	Conceptual	
1	4	Arch	Traction Power Substation	4.5.2	Ground Floor Plan / Elev & Sections	Conceptual	
1	4	Arch	Tie Breaker Station	4.5.2	Conceptual Development Drawing	Conceptual	3
1	4	Arch	Tie Breaker Station	4.5.2	Rendered Site Plan - 1	Conceptual	
1	4	Arch	Tie Breaker Station	4.5.2	Ground Floor Plan / Elev & Sections	Conceptual	
				4.5.2 Total			72
1	1	Arch	Tie Breaker Station	4.5.7	Ground Floor Plan	Design	3
1	1	Arch	Tie Breaker Station	4.5.7	Elevations and Sections	Design	
1	1	Arch	Tie Breaker Station	4.5.7	Misc. Details & Schedules	Design	
1	2	Arch	West Falls Church	4.5.7	Overall Site Plan	Design	5
1	2	Arch	West Falls Church	4.5.7	Ground Level Floor Plan	Design	
1	2	Arch	West Falls Church	4.5.7	Second Level Floor Plan	Design	
1	2	Arch	West Falls Church	4.5.7	Transverse Sections	Design	
1	2	Arch	West Falls Church	4.5.7	Exterior Elevations	Design	
1	3	Arch	Tysons East Station	4.5.7	Title Sheet - Drawing Index	Design	47
1	3	Arch	Tysons East Station	4.5.7	Overall Site Plan	Design	
1	3	Arch	Tysons East Station	4.5.7	Partial Site Plan	Design	
1	3	Arch	Tysons East Station	4.5.7	Partial Site Plan	Design	
1	3	Arch	Tysons East Station	4.5.7	Ground Level Floor Plan incl. Pavers	Design	
1	3	Arch	Tysons East Station	4.5.7	Mezzanine Level Floor Plan incl pavers	Design	
1	3	Arch	Tysons East Station	4.5.7	Platform Level Floor Plan incl pavers	Design	
1	3	Arch	Tysons East Station	4.5.7	Pedestrian Bridge Plan incl pavers	Design	
1	3	Arch	Tysons East Station	4.5.7	Detailed Plans	Design	
1	3	Arch	Tysons East Station	4.5.7	Detailed Plans	Design	
1	3	Arch	Tysons East Station	4.5.7	Detailed Plans	Design	
1	3	Arch	Tysons East Station	4.5.7	Ground Level Paving Plan incl area pavers	Design	
1	3	Arch	Tysons East Station	4.5.7	Reflected Ceiling Plan - Mezzanine	Design	
1	3	Arch	Tysons East Station	4.5.7	Reflected Ceiling Plan - Platform	Design	
1	3	Arch	Tysons East Station	4.5.7	Reflected Ceiling Plan - Ped Bridge	Design	
1	3	Arch	Tysons East Station	4.5.7	Detailed Reflected Ceiling Plans	Design	
1	3	Arch	Tysons East Station	4.5.7	Platform Canopy Roof Plan	Design	
1	3	Arch	Tysons East Station	4.5.7	Pedestrian Bridge Roof Plan	Design	
1	3	Arch	Tysons East Station	4.5.7	Ancillary Facility Roof Plan	Design	
1	3	Arch	Tysons East Station	4.5.7	Detailed Roof Plans	Design	
1	3	Arch	Tysons East Station	4.5.7	Longitudinal Sections	Design	
1	3	Arch	Tysons East Station	4.5.7	Longitudinal Sections	Design	
1	3	Arch	Tysons East Station	4.5.7	Transverse Sections	Design	
1	3	Arch	Tysons East Station	4.5.7	Transverse Sections	Design	
1	3	Arch	Tysons East Station	4.5.7	Exterior Elevations	Design	
1	3	Arch	Tysons East Station	4.5.7	Exterior Elevations	Design	
1	3	Arch	Tysons East Station	4.5.7	Partial Exterior Elevations	Design	
1	3	Arch	Tysons East Station	4.5.7	Partial Exterior Elevations	Design	
1	3	Arch	Tysons East Station	4.5.7	Interior Elevations	Design	
1	3	Arch	Tysons East Station	4.5.7	Stairway Sections	Design	
1	3	Arch	Tysons East Station	4.5.7	Stairway Sections	Design	
1	3	Arch	Tysons East Station	4.5.7	Stairway Details	Design	
1	3	Arch	Tysons East Station	4.5.7	Elevator Sections	Design	
1	3	Arch	Tysons East Station	4.5.7	Elevator Sections	Design	
1	3	Arch	Tysons East Station	4.5.7	Elevator Details	Design	
1	3	Arch	Tysons East Station	4.5.7	Escalator Sections	Design	
1	3	Arch	Tysons East Station	4.5.7	Escalator Sections	Design	
1	3	Arch	Tysons East Station	4.5.7	Escalator Details	Design	

LVL 1	LVL 2	Discipline	Dwg Group		Drawing Description	Drawing Type	Drawing Count by Group
WBS				SOW Para	DESCRIPTION		
						Design, Diag. or Standard	SOW No.
					ARCHITECTURAL		
1	3	Arch	Tysons East Station	4.5.7	Detailed Wall Sections	Design	
1	3	Arch	Tysons East Station	4.5.7	Detailed Wall Sections	Design	
1	3	Arch	Tysons East Station	4.5.7	Entrance Sections	Design	
1	3	Arch	Tysons East Station	4.5.7	Entrance Details	Design	
1	3	Arch	Tysons East Station	4.5.7	Pedestrian Bridge Detailed Sections	Design	
1	3	Arch	Tysons East Station	4.5.7	Pedestrian Bridge Details	Design	
1	3	Arch	Tysons East Station	4.5.7	Miscellaneous Details	Design	
1	3	Arch	Tysons East Station	4.5.7	Miscellaneous Details	Design	
1	3	Arch	Tysons East Station	4.5.7	Door & Finish Schedule	Design	
1	3	Arch	Tysons Central D Station	4.5.7	Title Sheet - Drawing Index	Design	25
1	3	Arch	Tysons Central D Station	4.5.7	Overall Site Plan	Design	
1	3	Arch	Tysons Central D Station	4.5.7	Partial Site Plan	Design	
1	3	Arch	Tysons Central D Station	4.5.7	Partial Site Plan	Design	
1	3	Arch	Tysons Central D Station	4.5.7	Ground Level Floor Plan incl. Pavers	Design	
1	3	Arch	Tysons Central D Station	4.5.7	Mezzanine Level Floor Plan incl pavers	Design	
1	3	Arch	Tysons Central D Station	4.5.7	Platform Level Floor Plan incl pavers	Design	
1	3	Arch	Tysons Central D Station	4.5.7	Pedestrian Bridge Plan incl pavers	Design	
1	3	Arch	Tysons Central D Station	4.5.7	Detailed Plans	Design	
1	3	Arch	Tysons Central D Station	4.5.7	Ground Level Paving Plan	Design	
1	3	Arch	Tysons Central D Station	4.5.7	Reflected Ceiling Plan - Mezzanine	Design	
1	3	Arch	Tysons Central D Station	4.5.7	Reflected Ceiling Plan - Platform	Design	
1	3	Arch	Tysons Central D Station	4.5.7	Reflected Ceiling Plan - Ped Bridge	Design	
1	3	Arch	Tysons Central D Station	4.5.7	Detailed Reflected Ceiling Plans	Design	
1	3	Arch	Tysons Central D Station	4.5.7	Longitudinal Sections	Design	
1	3	Arch	Tysons Central D Station	4.5.7	Longitudinal Sections	Design	
1	3	Arch	Tysons Central D Station	4.5.7	Transverse Sections	Design	
1	3	Arch	Tysons Central D Station	4.5.7	Transverse Sections	Design	
1	3	Arch	Tysons Central D Station	4.5.7	Exterior Elevations	Design	
1	3	Arch	Tysons Central D Station	4.5.7	Exterior Elevations	Design	
1	3	Arch	Tysons Central D Station	4.5.7	Partial Exterior Elevations	Design	
1	3	Arch	Tysons Central D Station	4.5.7	Partial Exterior Elevations	Design	
1	3	Arch	Tysons Central D Station	4.5.7	Interior Elevations	Design	
1	3	Arch	Tysons Central D Station	4.5.7	Miscellaneous Details	DD Dwgs	
1	3	Arch	Tysons Central D Station	4.5.7	Door & Finish Schedule	Design	
1	3	Arch	Tysons Central C Station	4.5.7	Title Sheet - Drawing Index	Design	37
1	3	Arch	Tysons Central C Station	4.5.7	Overall Site Plan	Design	
1	3	Arch	Tysons Central C Station	4.5.7	Partial Site Plan	Design	
1	3	Arch	Tysons Central C Station	4.5.7	Partial Site Plan	Design	
1	3	Arch	Tysons Central C Station	4.5.7	Ground Level Floor Plan incl. Pavers	Design	
1	3	Arch	Tysons Central C Station	4.5.7	Mezzanine Level Floor Plans incl pavers	Design	
1	3	Arch	Tysons Central C Station	4.5.7	Platform Level Floor Plan incl pavers	Design	
1	3	Arch	Tysons Central C Station	4.5.7	Detailed Plans	Design	
1	3	Arch	Tysons Central C Station	4.5.7	Detailed Plans	Design	
1	3	Arch	Tysons Central C Station	4.5.7	Detailed Plans	Design	
1	3	Arch	Tysons Central C Station	4.5.7	Ground Level Paving Plan incl area pavers	Design	
1	3	Arch	Tysons Central C Station	4.5.7	Reflected Ceiling Plan - Mezzanine	Design	
1	3	Arch	Tysons Central C Station	4.5.7	Reflected Ceiling Plan - Platform	Design	
1	3	Arch	Tysons Central C Station	4.5.7	Detailed Reflected Ceiling Plans	Design	
1	3	Arch	Tysons Central C Station	4.5.7	Longitudinal Sections	Design	
1	3	Arch	Tysons Central C Station	4.5.7	Longitudinal Sections	Design	
1	3	Arch	Tysons Central C Station	4.5.7	Transverse Sections	Design	
1	3	Arch	Tysons Central C Station	4.5.7	Transverse Sections	Design	
1	3	Arch	Tysons Central C Station	4.5.7	Exterior Elevations	Design	
1	3	Arch	Tysons Central C Station	4.5.7	Interior Elevations	Design	
1	3	Arch	Tysons Central C Station	4.5.7	Interior Elevations	Design	
1	3	Arch	Tysons Central C Station	4.5.7	Stairway Sections	Design	
1	3	Arch	Tysons Central C Station	4.5.7	Stairway Sections	Design	
1	3	Arch	Tysons Central C Station	4.5.7	Stairway Details	Design	
1	3	Arch	Tysons Central C Station	4.5.7	Elevator Sections	Design	
1	3	Arch	Tysons Central C Station	4.5.7	Elevator Sections	Design	
1	3	Arch	Tysons Central C Station	4.5.7	Elevator Details	Design	
1	3	Arch	Tysons Central C Station	4.5.7	Escalator Sections	Design	

LVL 1	LVL 2	Discipline	Dwg Group		Drawing Description	Drawing Type	Drawing Count by Group
WBS				SOW Para	DESCRIPTION		
						Design, Diag. or Standard	SOW No.
					ARCHITECTURAL		
1	3	Arch	Tysons Central C Station	4.5.7	Escalator Sections	Design	
1	3	Arch	Tysons Central C Station	4.5.7	Escalator Details	Design	
1	3	Arch	Tysons Central C Station	4.5.7	Detailed Wall Sections	Design	
1	3	Arch	Tysons Central C Station	4.5.7	Detailed Wall Sections	Design	
1	3	Arch	Tysons Central C Station	4.5.7	Entrance Sections	Design	
1	3	Arch	Tysons Central C Station	4.5.7	Entrance Details	Design	
1	3	Arch	Tysons Central C Station	4.5.7	Miscellaneous Details	DD Dwgs	
1	3	Arch	Tysons Central C Station	4.5.7	Miscellaneous Details	DD Dwgs	
1	3	Arch	Tysons Central C Station	4.5.7	Door & Finish Schedule	Design	
1	3	Arch	Tysons West Station	4.5.7	Title Sheet - Drawing Index	Design	25
1	3	Arch	Tysons West Station	4.5.7	Overall Site Plan	Design	
1	3	Arch	Tysons West Station	4.5.7	Partial Site Plan	Design	
1	3	Arch	Tysons West Station	4.5.7	Partial Site Plan	Design	
1	3	Arch	Tysons West Station	4.5.7	Ground Level Floor Plan incl. Pavers	Design	
1	3	Arch	Tysons West Station	4.5.7	Mezzanine Level Floor Plan incl pavers	Design	
1	3	Arch	Tysons West Station	4.5.7	Platform Level Floor Plan incl pavers	Design	
1	3	Arch	Tysons West Station	4.5.7	Pedestrian Bridge Plan incl pavers	Design	
1	3	Arch	Tysons West Station	4.5.7	Detailed Plans	Design	
1	3	Arch	Tysons West Station	4.5.7	Ground Level Paving Plan incl area pavers	Design	
1	3	Arch	Tysons West Station	4.5.7	Reflected Ceiling Plan - Mezzanine	Design	
1	3	Arch	Tysons West Station	4.5.7	Reflected Ceiling Plan - Platform	Design	
1	3	Arch	Tysons West Station	4.5.7	Reflected Ceiling Plan - Ped Bridge	Design	
1	3	Arch	Tysons West Station	4.5.7	Detailed Reflected Ceiling Plans	Design	
1	3	Arch	Tysons West Station	4.5.7	Longitudinal Sections	Design	
1	3	Arch	Tysons West Station	4.5.7	Longitudinal Sections	Design	
1	3	Arch	Tysons West Station	4.5.7	Transverse Sections	Design	
1	3	Arch	Tysons West Station	4.5.7	Transverse Sections	Design	
1	3	Arch	Tysons West Station	4.5.7	Exterior Elevations	Design	
1	3	Arch	Tysons West Station	4.5.7	Exterior Elevations	Design	
1	3	Arch	Tysons West Station	4.5.7	Partial Exterior Elevations	Design	
1	3	Arch	Tysons West Station	4.5.7	Partial Exterior Elevations	Design	
1	3	Arch	Tysons West Station	4.5.7	Interior Elevations	Design	
1	3	Arch	Tysons West Station	4.5.7	Miscellaneous Details	DD Dwgs	
1	3	Arch	Tysons West Station	4.5.7	Door & Finish Schedule	Design	
1	3	Arch	Wiehle Avenue Station	4.5.7	Title Sheet - Drawing Index	Design	43
1	3	Arch	Wiehle Avenue Station	4.5.7	Overall Site Plan	Design	
1	3	Arch	Wiehle Avenue Station	4.5.7	Partial Site Plan	Design	
1	3	Arch	Wiehle Avenue Station	4.5.7	Partial Site Plan	Design	
1	3	Arch	Wiehle Avenue Station	4.5.7	Mezzanine Level Floor Plan incl pavers	Design	
1	3	Arch	Wiehle Avenue Station	4.5.7	Platform Level Floor Plan incl pavers	Design	
1	3	Arch	Wiehle Avenue Station	4.5.7	Pedestrian Bridge Plan 1	Design	
1	3	Arch	Wiehle Avenue Station	4.5.7	Pedestrian Bridge Plan 2	Design	
1	3	Arch	Wiehle Avenue Station	4.5.7	Detailed Plans	Design	
1	3	Arch	Wiehle Avenue Station	4.5.7	Detailed Plans	Design	
1	3	Arch	Wiehle Avenue Station	4.5.7	Detailed Plans	Design	
1	3	Arch	Wiehle Avenue Station	4.5.7	Mezzanine Level Paving Plan incl pavers	Design	
1	3	Arch	Wiehle Avenue Station	4.5.7	Reflected Ceiling Plan - Mezzanine	Design	
1	3	Arch	Wiehle Avenue Station	4.5.7	Reflected Ceiling Plan - Platform	Design	
1	3	Arch	Wiehle Avenue Station	4.5.7	Reflected Ceiling Plan - Ped Bridge 1	Design	
1	3	Arch	Wiehle Avenue Station	4.5.7	Reflected Ceiling Plan - Ped Bridge 2	Design	
1	3	Arch	Wiehle Avenue Station	4.5.7	Detailed Reflected Ceiling Plans	Design	
1	3	Arch	Wiehle Avenue Station	4.5.7	Platform Canopy Roof Plan	Design	
1	3	Arch	Wiehle Avenue Station	4.5.7	Pedestrian Bridge Roof Plan 1	Design	
1	3	Arch	Wiehle Avenue Station	4.5.7	Pedestrian Bridge Roof Plan 2	Design	
1	3	Arch	Wiehle Avenue Station	4.5.7	Ancillary Facility Roof Plan	Design	
1	3	Arch	Wiehle Avenue Station	4.5.7	Detailed Roof Plans	Design	
1	3	Arch	Wiehle Avenue Station	4.5.7	Longitudinal Sections	Design	
1	3	Arch	Wiehle Avenue Station	4.5.7	Longitudinal Sections	Design	
1	3	Arch	Wiehle Avenue Station	4.5.7	Transverse Sections	Design	
1	3	Arch	Wiehle Avenue Station	4.5.7	Transverse Sections	Design	
1	3	Arch	Wiehle Avenue Station	4.5.7	Exterior Elevations	Design	
1	3	Arch	Wiehle Avenue Station	4.5.7	Exterior Elevations	Design	

LVL 1	LVL 2	Discipline	Dwg Group		Drawing Description	Drawing Type	Drawing Count by Group
WBS				SOW Para	DESCRIPTION		
						Design, Diag. or Standard	SOW No.
					ARCHITECTURAL		
1	3	Arch	Wiehle Avenue Station	4.5.7	Partial Exterior Elevations	Design	
1	3	Arch	Wiehle Avenue Station	4.5.7	Partial Exterior Elevations	Design	
1	3	Arch	Wiehle Avenue Station	4.5.7	Interior Elevations	Design	
1	3	Arch	Wiehle Avenue Station	4.5.7	Stairway Sections	Design	
1	3	Arch	Wiehle Avenue Station	4.5.7	Stairway Sections	Design	
1	3	Arch	Wiehle Avenue Station	4.5.7	Elevator Sections	Design	
1	3	Arch	Wiehle Avenue Station	4.5.7	Elevator Sections	Design	
1	3	Arch	Wiehle Avenue Station	4.5.7	Escalator Sections	Design	
1	3	Arch	Wiehle Avenue Station	4.5.7	Escalator Sections	Design	
1	3	Arch	Wiehle Avenue Station	4.5.7	Detailed Wall Sections	Design	
1	3	Arch	Wiehle Avenue Station	4.5.7	Entrance Sections	Design	
1	3	Arch	Wiehle Avenue Station	4.5.7	Entrance Details	Design	
1	3	Arch	Wiehle Avenue Station	4.5.7	Pedestrian Bridge Detailed Sections	Design	
1	3	Arch	Wiehle Avenue Station	4.5.7	Miscellaneous Details	DD Dwgs	
1	3	Arch	Wiehle Avenue Station	4.5.7	Door & Finish Schedule	Design	
1	3	Arch	Traction Power Substation	4.5.7	Ground Floor Plan	Design	4
1	3	Arch	Traction Power Substation	4.5.7	Elevations and Sections	Design	
1	3	Arch	Traction Power Substation	4.5.7	Misc. Details	Design	
1	3	Arch	Traction Power Substation	4.5.7	Misc. Details & Schedules	Design	
2	2	Arch	Rail Service & Inspection Bldg	4.5.7	Overall Site Plan	Design	5
2	2	Arch	Rail Service & Inspection Bldg	4.5.7	Ground Level Floor Plan	Design	
2	2	Arch	Rail Service & Inspection Bldg	4.5.7	Second Level Floor Plan	Design	
2	2	Arch	Rail Service & Inspection Bldg	4.5.7	Transverse Sections	Design	
2	2	Arch	Rail Service & Inspection Bldg	4.5.7	Exterior Elevations	Design	
2	2	Arch	Operations & Field Base Bldg	4.5.7	Ground Level Floor Plan	Design	4
2	2	Arch	Operations & Field Base Bldg	4.5.7	Second Level Floor Plan	Design	
2	2	Arch	Operations & Field Base Bldg	4.5.7	Transverse Sections	Design	
2	2	Arch	Operations & Field Base Bldg	4.5.7	Exterior Elevations	Design	
2	2	Arch	Vehicular & Storage Bldg	4.5.7	Ground Level Floor Plan	Design	3
2	2	Arch	Vehicular & Storage Bldg	4.5.7	Transverse Sections	Design	
2	2	Arch	Vehicular & Storage Bldg	4.5.7	Exterior Elevations	Design	
2	2	Arch	Equipment Storage Bldg	4.5.7	Ground Level Floor Plan	Design	1
2	2	Arch	Car Wash Facility	4.5.7	Ground Level Floor Plan	Design	1
2	2	Arch	Fueling Facility	4.5.7	Ground Level Floor Plan	Design	1
2	3	Arch	Reston Parkway Station	4.5.7	Title Sheet - Drawing Index	Design	18
2	3	Arch	Reston Parkway Station	4.5.7	Overall Site Plan	Design	
2	3	Arch	Reston Parkway Station	4.5.7	Partial Site Plan	Design	
2	3	Arch	Reston Parkway Station	4.5.7	Partial Site Plan	Design	
2	3	Arch	Reston Parkway Station	4.5.7	Mezzanine Level Floor Plan incl pavers	Design	
2	3	Arch	Reston Parkway Station	4.5.7	Platform Level Floor Plan incl pavers	Design	
2	3	Arch	Reston Parkway Station	4.5.7	Pedestrian Bridge Plan 1 & 2 incl pavers	Design	
2	3	Arch	Reston Parkway Station	4.5.7	Detailed Plans	Design	
2	3	Arch	Reston Parkway Station	4.5.7	Ground Level Paving Plan	Design	
2	3	Arch	Reston Parkway Station	4.5.7	Reflected Ceiling Plan - Mezzanine	Design	
2	3	Arch	Reston Parkway Station	4.5.7	Reflected Ceiling Plan - Platform	Design	
2	3	Arch	Reston Parkway Station	4.5.7	Refl. Ceiling Plan - Ped Bridge 1 & 2	Design	
2	3	Arch	Reston Parkway Station	4.5.7	Longitudinal Sections	Design	
2	3	Arch	Reston Parkway Station	4.5.7	Transverse Sections	Design	
2	3	Arch	Reston Parkway Station	4.5.7	Transverse Sections	Design	
2	3	Arch	Reston Parkway Station	4.5.7	Exterior Elevations	Design	
2	3	Arch	Reston Parkway Station	4.5.7	Miscellaneous Details	DD Dwgs	
2	3	Arch	Reston Parkway Station	4.5.7	Door & Finish Schedule	Design	
2	3	Arch	Herndon Monroe Station	4.5.7	Title Sheet - Drawing Index	Design	17
2	3	Arch	Herndon Monroe Station	4.5.7	Overall Site Plan	Design	
2	3	Arch	Herndon Monroe Station	4.5.7	Partial Site Plan	Design	
2	3	Arch	Herndon Monroe Station	4.5.7	Partial Site Plan	Design	
2	3	Arch	Herndon Monroe Station	4.5.7	Mezzanine Level Floor Plan incl pavers	Design	
2	3	Arch	Herndon Monroe Station	4.5.7	Platform Level Floor Plan incl pavers	Design	
2	3	Arch	Herndon Monroe Station	4.5.7	Pedestrian Bridge Plan 1 & 2 incl pavers	Design	
2	3	Arch	Herndon Monroe Station	4.5.7	Detailed Plans	Design	
2	3	Arch	Herndon Monroe Station	4.5.7	Reflected Ceiling Plan - Mezzanine	Design	
2	3	Arch	Herndon Monroe Station	4.5.7	Reflected Ceiling Plan - Platform	Design	

LVL 1	LVL 2	Discipline	Dwg Group		Drawing Description	Drawing Type	Drawing Count by Group
WBS				SOW Para	DESCRIPTION		
						Design, Diag. or Standard	SOW No.
					ARCHITECTURAL		
2	3	Arch	Herndon Monroe Station	4.5.7	Refl. Ceiling Plan - Ped Bridge 1 & 2	Design	
2	3	Arch	Herndon Monroe Station	4.5.7	Longitudinal Sections	Design	
2	3	Arch	Herndon Monroe Station	4.5.7	Transverse Sections	Design	
2	3	Arch	Herndon Monroe Station	4.5.7	Transverse Sections	Design	
2	3	Arch	Herndon Monroe Station	4.5.7	Exterior Elevations	Design	
2	3	Arch	Herndon Monroe Station	4.5.7	Miscellaneous Details	DD Dwgs	
2	3	Arch	Herndon Monroe Station	4.5.7	Door & Finish Schedule	Design	
2	3	Arch	Herndon Monroe Parking Struct	4.5.7	Overall Site Plan	Design	9
2	3	Arch	Herndon Monroe Parking Struct	4.5.7	Partial Site Plan	Design	
2	3	Arch	Herndon Monroe Parking Struct	4.5.7	Ground Level Floor Plan	Design	
2	3	Arch	Herndon Monroe Parking Struct	4.5.7	Second Floor Plan	Design	
2	3	Arch	Herndon Monroe Parking Struct	4.5.7	TypicaL Floor Plan	Design	
2	3	Arch	Herndon Monroe Parking Struct	4.5.7	Top/Roof Floor Plan	Design	
2	3	Arch	Herndon Monroe Parking Struct	4.5.7	Longitudinal Sections	Design	
2	3	Arch	Herndon Monroe Parking Struct	4.5.7	Transverse Sections	Design	
2	3	Arch	Herndon Monroe Parking Struct	4.5.7	Exterior Elevations	Design	
2	3	Arch	Route 28 Station	4.5.7	Title Sheet - Drawing Index	Design	17
2	3	Arch	Route 28 Station	4.5.7	Overall Site Plan	Design	
2	3	Arch	Route 28 Station	4.5.7	Partial Site Plan	Design	
2	3	Arch	Route 28 Station	4.5.7	Partial Site Plan	Design	
2	3	Arch	Route 28 Station	4.5.7	Mezzanine Level Floor Plan incl pavers	Design	
2	3	Arch	Route 28 Station	4.5.7	Platform Level Floor Plan incl pavers	Design	
2	3	Arch	Route 28 Station	4.5.7	Pedestrian Bridge Plan 1 & 2 incl pavers	Design	
2	3	Arch	Route 28 Station	4.5.7	Detailed Plans	Design	
2	3	Arch	Route 28 Station	4.5.7	Reflected Ceiling Plan - Mezzanine	Design	
2	3	Arch	Route 28 Station	4.5.7	Reflected Ceiling Plan - Platform	Design	
2	3	Arch	Route 28 Station	4.5.7	Refl. Ceiling Plan - Ped Bridge 1 & 2	Design	
2	3	Arch	Route 28 Station	4.5.7	Longitudinal Sections	Design	
2	3	Arch	Route 28 Station	4.5.7	Transverse Sections	Design	
2	3	Arch	Route 28 Station	4.5.7	Transverse Sections	Design	
2	3	Arch	Route 28 Station	4.5.7	Exterior Elevations	Design	
2	3	Arch	Route 28 Station	4.5.7	Miscellaneous Details	DD Dwgs	
2	3	Arch	Route 28 Station	4.5.7	Door & Finish Schedule	Design	
2	3	Arch	Route 28 Parking Structure	4.5.7	Overall Site Plan	Design	9
2	3	Arch	Route 28 Parking Structure	4.5.7	Partial Site Plan	Design	
2	3	Arch	Route 28 Parking Structure	4.5.7	Ground Level Floor Plan	Design	
2	3	Arch	Route 28 Parking Structure	4.5.7	Second Floor Plan	Design	
2	3	Arch	Route 28 Parking Structure	4.5.7	TypicaL Floor Plan	Design	
2	3	Arch	Route 28 Parking Structure	4.5.7	Top/Roof Floor Plan	Design	
2	3	Arch	Route 28 Parking Structure	4.5.7	Longitudinal Sections	Design	
2	3	Arch	Route 28 Parking Structure	4.5.7	Transverse Sections	Design	
2	3	Arch	Route 28 Parking Structure	4.5.7	Exterior Elevations	Design	
2	3	Arch	Dulles Airport Station	4.5.7	Title Sheet - Drawing Index	Design	28
2	3	Arch	Dulles Airport Station	4.5.7	Overall Site Plan	Design	
2	3	Arch	Dulles Airport Station	4.5.7	Partial Site Plan	Design	
2	3	Arch	Dulles Airport Station	4.5.7	Ground Level Floor Plan incl. Pavers	Design	
2	3	Arch	Dulles Airport Station	4.5.7	Mezzanine Level Floor Plans incl pavers	Design	
2	3	Arch	Dulles Airport Station	4.5.7	Platform Level Floor Plan incl pavers	Design	
2	3	Arch	Dulles Airport Station	4.5.7	Detailed Plans	Design	
2	3	Arch	Dulles Airport Station	4.5.7	Detailed Plans	Design	
2	3	Arch	Dulles Airport Station	4.5.7	Ground Level Paving Plan	Design	
2	3	Arch	Dulles Airport Station	4.5.7	Reflected Ceiling Plan - Mezzanine	Design	
2	3	Arch	Dulles Airport Station	4.5.7	Reflected Ceiling Plan - Platform	Design	
2	3	Arch	Dulles Airport Station	4.5.7	Longitudinal Sections	Design	
2	3	Arch	Dulles Airport Station	4.5.7	Longitudinal Sections	Design	
2	3	Arch	Dulles Airport Station	4.5.7	Transverse Sections	Design	
2	3	Arch	Dulles Airport Station	4.5.7	Transverse Sections	Design	
2	3	Arch	Dulles Airport Station	4.5.7	Exterior Elevations	Design	
2	3	Arch	Dulles Airport Station	4.5.7	Interior Elevations	Design	
2	3	Arch	Dulles Airport Station	4.5.7	Interior Elevations	Design	
2	3	Arch	Dulles Airport Station	4.5.7	Stairway Sections	Design	
2	3	Arch	Dulles Airport Station	4.5.7	Stairway Sections	Design	

LVL 1	LVL 2	Discipline	Dwg Group		Drawing Description	Drawing Type	Drawing Count by Group
WBS				SOW Para	DESCRIPTION		
						Design, Diag. or Standard	SOW No.
					ARCHITECTURAL		
2	3	Arch	Dulles Airport Station	4.5.7	Elevator Sections	Design	
2	3	Arch	Dulles Airport Station	4.5.7	Elevator Sections	Design	
2	3	Arch	Dulles Airport Station	4.5.7	Escalator Sections	Design	
2	3	Arch	Dulles Airport Station	4.5.7	Escalator Sections	Design	
2	3	Arch	Dulles Airport Station	4.5.7	Detailed Wall Sections	Design	
2	3	Arch	Dulles Airport Station	4.5.7	Entrance Sections	Design	
2	3	Arch	Dulles Airport Station	4.5.7	Miscellaneous Details	DD Dwgs	
2	3	Arch	Dulles Airport Station	4.5.7	Door & Finish Schedule	Design	
2	3	Arch	Route 606 Station	4.5.7	Title Sheet - Drawing Index	Design	17
2	3	Arch	Route 606 Station	4.5.7	Overall Site Plan	Design	
2	3	Arch	Route 606 Station	4.5.7	Partial Site Plan	Design	
2	3	Arch	Route 606 Station	4.5.7	Partial Site Plan	Design	
2	3	Arch	Route 606 Station	4.5.7	Mezzanine Level Floor Plan incl pavers	Design	
2	3	Arch	Route 606 Station	4.5.7	Platform Level Floor Plan incl pavers	Design	
2	3	Arch	Route 606 Station	4.5.7	Pedestrian Bridge Plan incl pavers	Design	
2	3	Arch	Route 606 Station	4.5.7	Detailed Plans	Design	
2	3	Arch	Route 606 Station	4.5.7	Reflected Ceiling Plan - Mezzanine	Design	
2	3	Arch	Route 606 Station	4.5.7	Reflected Ceiling Plan - Platform	Design	
2	3	Arch	Route 606 Station	4.5.7	Refl. Ceiling Plan - Ped Bridge	Design	
2	3	Arch	Route 606 Station	4.5.7	Longitudinal Sections	Design	
2	3	Arch	Route 606 Station	4.5.7	Transverse Sections	Design	
2	3	Arch	Route 606 Station	4.5.7	Transverse Sections	Design	
2	3	Arch	Route 606 Station	4.5.7	Exterior Elevations	Design	
2	3	Arch	Route 606 Station	4.5.7	Miscellaneous Details	DD Dwgs	
2	3	Arch	Route 606 Station	4.5.7	Door & Finish Schedule	Design	
2	3	Arch	Route 606 Parking Structure	4.5.7	Overall Site Plan	Design	9
2	3	Arch	Route 606 Parking Structure	4.5.7	Partial Site Plan	Design	
2	3	Arch	Route 606 Parking Structure	4.5.7	Ground Level Floor Plan	Design	
2	3	Arch	Route 606 Parking Structure	4.5.7	Second Floor Plan	Design	
2	3	Arch	Route 606 Parking Structure	4.5.7	TypicaL Floor Plan	Design	
2	3	Arch	Route 606 Parking Structure	4.5.7	Top/Roof Floor Plan	Design	
2	3	Arch	Route 606 Parking Structure	4.5.7	Longitudinal Sections	Design	
2	3	Arch	Route 606 Parking Structure	4.5.7	Transverse Sections	Design	
2	3	Arch	Route 606 Parking Structure	4.5.7	Exterior Elevations	Design	
2	3	Arch	Route 772 Station	4.5.7	Title Sheet - Drawing Index	Design	17
2	3	Arch	Route 772 Station	4.5.7	Overall Site Plan	Design	
2	3	Arch	Route 772 Station	4.5.7	Partial Site Plan	Design	
2	3	Arch	Route 772 Station	4.5.7	Partial Site Plan	Design	
2	3	Arch	Route 772 Station	4.5.7	Mezzanine Level Floor Plan incl pavers	Design	
2	3	Arch	Route 772 Station	4.5.7	Platform Level Floor Plan incl pavers	Design	
2	3	Arch	Route 772 Station	4.5.7	Pedestrian Bridge Plan incl pavers	Design	
2	3	Arch	Route 772 Station	4.5.7	Detailed Plans	Design	
2	3	Arch	Route 772 Station	4.5.7	Reflected Ceiling Plan - Mezzanine	Design	
2	3	Arch	Route 772 Station	4.5.7	Reflected Ceiling Plan - Platform	Design	
2	3	Arch	Route 772 Station	4.5.7	Refl. Ceiling Plan - Ped Bridge	Design	
2	3	Arch	Route 772 Station	4.5.7	Longitudinal Sections	Design	
2	3	Arch	Route 772 Station	4.5.7	Transverse Sections	Design	
2	3	Arch	Route 772 Station	4.5.7	Transverse Sections	Design	
2	3	Arch	Route 772 Station	4.5.7	Exterior Elevations	Design	
2	3	Arch	Route 772 Station	4.5.7	Miscellaneous Details	DD Dwgs	
2	3	Arch	Route 772 Station	4.5.7	Door & Finish Schedule	Design	
				4.5.7 Total			**345**
				Grand Total			**417**

LVL 1	LVL 2	Discipline	Dwg Group		Drawing Description	Drawing Type	Drawing Count by Group
WBS				SOW Para	DESCRIPTION		
						Design, Diag. or Standard	SOW No.
					BRIDGES		
					4.4.1 Total		**308**
1	1	Bridges	Aerial Guideway & Yard Connector	4.4.1	General Plan & Elevation (Key Plan)	Design	40
1	1	Bridges	Aerial Guideway & Yard Connector	4.4.1	Plan & Elevation - Sheet 1	Design	
1	1	Bridges	Aerial Guideway & Yard Connector	4.4.1	Plan & Elevation - Sheet 2	Design	
1	1	Bridges	Aerial Guideway & Yard Connector	4.4.1	Plan & Elevation - Sheet 3	Design	
1	1	Bridges	Aerial Guideway & Yard Connector	4.4.1	Plan & Elevation - Sheet 4	Design	
1	1	Bridges	Aerial Guideway & Yard Connector	4.4.1	Plan & Elevation - Sheet 5	Design	
1	1	Bridges	Aerial Guideway & Yard Connector	4.4.1	Plan & Elevation - Sheet 6	Design	
1	1	Bridges	Aerial Guideway & Yard Connector	4.4.1	Plan & Elevation - Sheet 7	Design	
1	1	Bridges	Aerial Guideway & Yard Connector	4.4.1	Plan & Elevation - Sheet 8	Design	
1	1	Bridges	Aerial Guideway & Yard Connector	4.4.1	Plan & Elevation - Sheet 9	Design	
1	1	Bridges	Aerial Guideway & Yard Connector	4.4.1	Profile	Design	
1	1	Bridges	Aerial Guideway & Yard Connector	4.4.1	Typical Sections - Single Track	Design	
1	1	Bridges	Aerial Guideway & Yard Connector	4.4.1	Typical Sections - Double Track	Design	
1	1	Bridges	Aerial Guideway & Yard Connector	4.4.1	Typical Sections - Pocket Track	Design	
1	1	Bridges	Aerial Guideway & Yard Connector	4.4.1	Typical Sections - Approach	Design	
1	1	Bridges	Aerial Guideway & Yard Connector	4.4.1	Foundation Plan - Sheet 1	Design	
1	1	Bridges	Aerial Guideway & Yard Connector	4.4.1	Foundation Plan - Sheet 2	Design	
1	1	Bridges	Aerial Guideway & Yard Connector	4.4.1	Foundation Plan - Sheet 3	Design	
1	1	Bridges	Aerial Guideway & Yard Connector	4.4.1	Foundation Plan - Sheet 4	Design	
1	1	Bridges	Aerial Guideway & Yard Connector	4.4.1	Caisson Details - Sheet 1	Design	
1	1	Bridges	Aerial Guideway & Yard Connector	4.4.1	Caisson Details - Sheet 2	Design	
1	1	Bridges	Aerial Guideway & Yard Connector	4.4.1	Abutment Plan, Elevation & Section	Design	
1	1	Bridges	Aerial Guideway & Yard Connector	4.4.1	Wingwall Elevation & Sections	Design	
1	1	Bridges	Aerial Guideway & Yard Connector	4.4.1	Abutment Foundation Plan & Details	Design	
1	1	Bridges	Aerial Guideway & Yard Connector	4.4.1	Pier Type 1 - Single Track on Single Column: Plan, Elevation & Details	Design	
1	1	Bridges	Aerial Guideway & Yard Connector	4.4.1	Pier Type 2 - Single Track on Cantilever Column: Plan, Elevation & Details	Design	
1	1	Bridges	Aerial Guideway & Yard Connector	4.4.1	Pier Type 3 - Pocket Track on Pier Bent: Plan, Elevation & Details	Design	
1	1	Bridges	Aerial Guideway & Yard Connector	4.4.1	Segment Designations - Sheet 1	Design	
1	1	Bridges	Aerial Guideway & Yard Connector	4.4.1	Segment Designations - Sheet 2	Design	
1	1	Bridges	Aerial Guideway & Yard Connector	4.4.1	Segment Designations - Sheet 3	Design	
1	1	Bridges	Aerial Guideway & Yard Connector	4.4.1	Segment Designations - Sheet 4	Design	
1	1	Bridges	Aerial Guideway & Yard Connector	4.4.1	Typical Segment Dimensions	Design	
1	1	Bridges	Aerial Guideway & Yard Connector	4.4.1	Variable Depth Segment Dimensions	Design	
1	1	Bridges	Aerial Guideway & Yard Connector	4.4.1	Pier Segment Dimensions - Sheet 1	Design	
1	1	Bridges	Aerial Guideway & Yard Connector	4.4.1	Pier Segment Dimensions - Sheet 2	Design	
1	1	Bridges	Aerial Guideway & Yard Connector	4.4.1	Expansion Segment Dimensions - Sheet 1	Design	
1	1	Bridges	Aerial Guideway & Yard Connector	4.4.1	Expansion Segment Dimensions - Sheet 2	Design	
1	1	Bridges	Aerial Guideway & Yard Connector	4.4.1	Deck Joint - 1	Design	
1	1	Bridges	Aerial Guideway & Yard Connector	4.4.1	Erection Scheme - 1	Design	
1	1	Bridges	Aerial Guideway & Yard Connector	4.4.1	Erection Scheme - 2	Design	
1	1	Bridges	Crashwalls	4.4.1	General Plan & Elevations Sht 1	Design	12
1	1	Bridges	Crashwalls	4.4.1	General Plan & Elevations Sht 2	Design	
1	1	Bridges	Crashwalls	4.4.1	General Plan & Elevations Sht 3	Design	
1	1	Bridges	Crashwalls	4.4.1	General Plan & Elevations Sht 4	Design	
1	1	Bridges	Crashwalls	4.4.1	Crashwall Details -1 Sht 1	Design	
1	1	Bridges	Crashwalls	4.4.1	Crashwall Details -1 Sht 2	Design	
1	1	Bridges	Crashwalls	4.4.1	Crashwall Details -1 Sht 3	Design	
1	1	Bridges	Crashwalls	4.4.1	Crashwall Details -1 Sht 4	Design	
1	1	Bridges	Crashwalls	4.4.1	Crashwall Details -2 Sht 1	Design	
1	1	Bridges	Crashwalls	4.4.1	Crashwall Details -2 Sht 2	Design	
1	1	Bridges	Crashwalls	4.4.1	Crashwall Details -2 Sht 3	Design	
1	1	Bridges	Crashwalls	4.4.1	Crashwall Details -2 Sht 4	Design	
1	1	Bridges	D1 over Difficult Run Bridge	4.4.1	General Plan & Elevation	Design	15
1	1	Bridges	D1 over Difficult Run Bridge	4.4.1	Profile	Design	
1	1	Bridges	D1 over Difficult Run Bridge	4.4.1	Typical Sections	Design	
1	1	Bridges	D1 over Difficult Run Bridge	4.4.1	Abutment Plan, Elevation & Section	Design	
1	1	Bridges	D1 over Difficult Run Bridge	4.4.1	Abutment Foundation Plan & Details	Design	
1	1	Bridges	D1 over Difficult Run Bridge	4.4.1	Pier Plan, Elevation & Section	Design	
1	1	Bridges	D1 over Difficult Run Bridge	4.4.1	Pier Foundation Plan & Details	Design	
1	1	Bridges	D1 over Difficult Run Bridge	4.4.1	Pier (Slope) Protection Details	Design	
1	1	Bridges	D1 over Difficult Run Bridge	4.4.1	Framing Plan	Design	
1	1	Bridges	D1 over Difficult Run Bridge	4.4.1	Girder Schedule & Details	Design	

LVL 1	LVL 2	Discipline	Dwg Group		Drawing Description	Drawing Type	Drawing Count by Group
WBS				SOW Para	DESCRIPTION		
						Design, Diag. or Standard	SOW No.
					BRIDGES		
1	1	Bridges	D1 over Difficult Run Bridge	4.4.1	Diaphragm Details	Design	
1	1	Bridges	D1 over Difficult Run Bridge	4.4.1	Lateral Bracing Details	Design	
1	1	Bridges	D1 over Difficult Run Bridge	4.4.1	Deck Plan & Sections	Design	
1	1	Bridges	D1 over Difficult Run Bridge	4.4.1	Deck Details - 1	Design	
1	1	Bridges	D1 over Difficult Run Bridge	4.4.1	Deck Joint - 1	Design	
1	1	Bridges	D1 over Hunter Hill Road Bridge	4.4.1	General Plan & Elevation	Design	14
1	1	Bridges	D1 over Hunter Hill Road Bridge	4.4.1	Profile	Design	
1	1	Bridges	D1 over Hunter Hill Road Bridge	4.4.1	Typical Sections	Design	
1	1	Bridges	D1 over Hunter Hill Road Bridge	4.4.1	Abutment Plan, Elevation & Section	Design	
1	1	Bridges	D1 over Hunter Hill Road Bridge	4.4.1	Abutment Foundation Plan & Details	Design	
1	1	Bridges	D1 over Hunter Hill Road Bridge	4.4.1	Pier Plan, Elevation & Section	Design	
1	1	Bridges	D1 over Hunter Hill Road Bridge	4.4.1	Pier Foundation Plan & Details	Design	
1	1	Bridges	D1 over Hunter Hill Road Bridge	4.4.1	Framing Plan	Design	
1	1	Bridges	D1 over Hunter Hill Road Bridge	4.4.1	Girder Schedule & Details	Design	
1	1	Bridges	D1 over Hunter Hill Road Bridge	4.4.1	Diaphragm Details	Design	
1	1	Bridges	D1 over Hunter Hill Road Bridge	4.4.1	Lateral Bracing Details	Design	
1	1	Bridges	D1 over Hunter Hill Road Bridge	4.4.1	Deck Plan & Sections	Design	
1	1	Bridges	D1 over Hunter Hill Road Bridge	4.4.1	Deck Details - 1	Design	
1	1	Bridges	D1 over Hunter Hill Road Bridge	4.4.1	Deck Joint - 1	Design	
1	1	Bridges	D1 over W & OD Bike Trail Bridge	4.4.1	General Plan & Elevation	Design	14
1	1	Bridges	D1 over W & OD Bike Trail Bridge	4.4.1	Profile	Design	
1	1	Bridges	D1 over W & OD Bike Trail Bridge	4.4.1	Typical Sections	Design	
1	1	Bridges	D1 over W & OD Bike Trail Bridge	4.4.1	Abutment Plan, Elevation & Section	Design	
1	1	Bridges	D1 over W & OD Bike Trail Bridge	4.4.1	Abutment Foundation Plan & Details	Design	
1	1	Bridges	D1 over W & OD Bike Trail Bridge	4.4.1	Pier Plan, Elevation & Section	Design	
1	1	Bridges	D1 over W & OD Bike Trail Bridge	4.4.1	Pier Foundation Plan & Details	Design	
1	1	Bridges	D1 over W & OD Bike Trail Bridge	4.4.1	Framing Plan	Design	
1	1	Bridges	D1 over W & OD Bike Trail Bridge	4.4.1	Girder Schedule & Details	Design	
1	1	Bridges	D1 over W & OD Bike Trail Bridge	4.4.1	Diaphragm Details	Design	
1	1	Bridges	D1 over W & OD Bike Trail Bridge	4.4.1	Lateral Bracing Details	Design	
1	1	Bridges	D1 over W & OD Bike Trail Bridge	4.4.1	Deck Plan & Sections	Design	
1	1	Bridges	D1 over W & OD Bike Trail Bridge	4.4.1	Deck Details - 1	Design	
1	1	Bridges	D1 over W & OD Bike Trail Bridge	4.4.1	Deck Joint - 1	Design	
1	1	Bridges	DD Dwgs	4.4.1	Structural Design Drawing DD-S-191H: Typical Aerial Structural Girder Sections, Precast Prestressed Span or Segmental	DD Dwgs	12
1	1	Bridges	DD Dwgs	4.4.1	Structural Design Drawing DD-S-191K: Aerial Structure Tangent Precast Prestressed Segmental or CIP Girder Sections & Details	DD Dwgs	
1	1	Bridges	DD Dwgs	4.4.1	Structural Design Drawing DD-S-301: Station Aerial Structure Precast Prestressed Span, Precast Pier Cap Post-Tensioned to Column	DD Dwgs	
1	1	Bridges	DD Dwgs	4.4.1	Structural Design Drawing DD-S-302: Station Aerial Structure Section D-D, Precast Pier Cap Post-Tensioned to Column	DD Dwgs	
1	1	Bridges	DD Dwgs	4.4.1	Structural Design Drawing DD-S-303: Station Aerial Structure Section E-E, Precast Pier Cap Post-Tensioned to Column	DD Dwgs	
1	1	Bridges	DD Dwgs	4.4.1	Structural Design Drawing DD-S-304: Station Aerial Structure Section C-C & F-F, Precast Pier Cap Post-Tensioned to Column	DD Dwgs	
1	1	Bridges	DD Dwgs	4.4.1	Structural Design Drawing DD-S-304: Station Aerial Structure Section B-B, Precast Pier Cap Post-Tensioned to Column	DD Dwgs	
1	1	Bridges	DD Dwgs	4.4.1	Structural Design Drawing DD-S-093: Aerial Structure Handrail & Joints	DD Dwgs	
1	1	Bridges	DD Dwgs	4.4.1	Structural Design Drawing DD-S-101: Aeial Styructure Elevations, Sections & Details (Walkway & Accoustical Barrier)	DD Dwgs	
1	1	Bridges	DD Dwgs	4.4.1	Structural Design Drawing DD-S-120: Typical Details of Expansion Joints	DD Dwgs	
1	1	Bridges	DD Dwgs	4.4.1	Structural Design Drawing DD-S-128: Aeial Styructure Details for Inspection Access and Drainage Provisions	DD Dwgs	
1	1	Bridges	DD Dwgs	4.4.1	Structural Design Drawing DD-S-137: Box Girder Bearing Replacement Details	DD Dwgs	
1	1	Bridges	General Drawings	4.4.1	Index of Drawings	Design	4
1	1	Bridges	General Drawings	4.4.1	General Notes - I	Design	

LVL 1	LVL 2	Discipline	Dwg Group		Drawing Description	Drawing Type	Drawing Count by Group
WBS				SOW Para	DESCRIPTION		
						Design, Diag. or Standard	SOW No.
					BRIDGES		
1	1	Bridges	General Drawings	4.4.1	General Notes - II	Design	
1	1	Bridges	General Drawings	4.4.1	Abbreviations and Symboles	Design	
1	1	Bridges	O1 over Magarity Road	4.4.1	General Plan & Elevation	Design	10
1	1	Bridges	O1 over Magarity Road	4.4.1	Profile	Design	
1	1	Bridges	O1 over Magarity Road	4.4.1	Typical Sections	Design	
1	1	Bridges	O1 over Magarity Road	4.4.1	Abutment Plan, Elevation & Section	Design	
1	1	Bridges	O1 over Magarity Road	4.4.1	Abutment Foundation Plan & Details	Design	
1	1	Bridges	O1 over Magarity Road	4.4.1	Superstructure Layout Plan	Design	
1	1	Bridges	O1 over Magarity Road	4.4.1	Concrete Box Beam Transverse Sections - 1	Design	
1	1	Bridges	O1 over Magarity Road	4.4.1	Concrete Box Beam Transverse Sections - 2	Design	
1	1	Bridges	O1 over Magarity Road	4.4.1	Post-Tensioning Layout	Design	
1	1	Bridges	O1 over Magarity Road	4.4.1	Deck Joint - 1	Design	
1	1	Bridges	O1 over Pimmit Run Bridge	4.4.1	General Plan & Elevation	Design	12
1	1	Bridges	O1 over Pimmit Run Bridge	4.4.1	Profile	Design	
1	1	Bridges	O1 over Pimmit Run Bridge	4.4.1	Typical Sections	Design	
1	1	Bridges	O1 over Pimmit Run Bridge	4.4.1	Abutment Plan, Elevation & Section	Design	
1	1	Bridges	O1 over Pimmit Run Bridge	4.4.1	Abutment Foundation Plan & Details	Design	
1	1	Bridges	O1 over Pimmit Run Bridge	4.4.1	Pier - Plan, Elevation & Sections	Design	
1	1	Bridges	O1 over Pimmit Run Bridge	4.4.1	Pier - Foundation Plan & Details	Design	
1	1	Bridges	O1 over Pimmit Run Bridge	4.4.1	Beam Layout & Transverse Section	Design	
1	1	Bridges	O1 over Pimmit Run Bridge	4.4.1	Deck Plan - 1	Design	
1	1	Bridges	O1 over Pimmit Run Bridge	4.4.1	Deck Plan - 2	Design	
1	1	Bridges	O1 over Pimmit Run Bridge	4.4.1	Deck Details - 1	Design	
1	1	Bridges	O1 over Pimmit Run Bridge	4.4.1	Deck Joint - 1	Design	
1	1	Bridges	T6 Tysons East Aerial Guideway	4.4.1	General Plan & Elevation (Key Plan)	Design	67
1	1	Bridges	T6 Tysons East Aerial Guideway	4.4.1	Plan & Elevation - Sheet 1	Design	
1	1	Bridges	T6 Tysons East Aerial Guideway	4.4.1	Plan & Elevation - Sheet 2	Design	
1	1	Bridges	T6 Tysons East Aerial Guideway	4.4.1	Plan & Elevation - Sheet 3	Design	
1	1	Bridges	T6 Tysons East Aerial Guideway	4.4.1	Plan & Elevation - Sheet 4	Design	
1	1	Bridges	T6 Tysons East Aerial Guideway	4.4.1	Plan & Elevation - Sheet 5	Design	
1	1	Bridges	T6 Tysons East Aerial Guideway	4.4.1	Plan & Elevation - Sheet 6	Design	
1	1	Bridges	T6 Tysons East Aerial Guideway	4.4.1	Plan & Elevation - Sheet 7	Design	
1	1	Bridges	T6 Tysons East Aerial Guideway	4.4.1	Plan & Elevation - Sheet 8	Design	
1	1	Bridges	T6 Tysons East Aerial Guideway	4.4.1	Plan & Elevation - Sheet 9	Design	
1	1	Bridges	T6 Tysons East Aerial Guideway	4.4.1	Plan & Elevation - Sheet 10	Design	
1	1	Bridges	T6 Tysons East Aerial Guideway	4.4.1	Plan & Elevation - Sheet 11	Design	
1	1	Bridges	T6 Tysons East Aerial Guideway	4.4.1	Plan & Elevation - Sheet 12	Design	
1	1	Bridges	T6 Tysons East Aerial Guideway	4.4.1	Plan & Elevation - Sheet 13	Design	
1	1	Bridges	T6 Tysons East Aerial Guideway	4.4.1	Plan & Elevation - Sheet 14	Design	
1	1	Bridges	T6 Tysons East Aerial Guideway	4.4.1	Plan & Elevation - Sheet 15	Design	
1	1	Bridges	T6 Tysons East Aerial Guideway	4.4.1	Plan & Elevation - Sheet 16	Design	
1	1	Bridges	T6 Tysons East Aerial Guideway	4.4.1	Plan & Elevation - Sheet 17	Design	
1	1	Bridges	T6 Tysons East Aerial Guideway	4.4.1	Plan & Elevation - Sheet 18	Design	
1	1	Bridges	T6 Tysons East Aerial Guideway	4.4.1	Profile - Sheet 1	Design	
1	1	Bridges	T6 Tysons East Aerial Guideway	4.4.1	Profile - Sheet 2	Design	
1	1	Bridges	T6 Tysons East Aerial Guideway	4.4.1	Typical Sections - Single Track	Design	
1	1	Bridges	T6 Tysons East Aerial Guideway	4.4.1	Typical Sections - Double Track	Design	
1	1	Bridges	T6 Tysons East Aerial Guideway	4.4.1	Typical Sections - Pocket Track	Design	
1	1	Bridges	T6 Tysons East Aerial Guideway	4.4.1	Typical Sections - Station	Design	
1	1	Bridges	T6 Tysons East Aerial Guideway	4.4.1	Typical Sections - Approach	Design	
1	1	Bridges	T6 Tysons East Aerial Guideway	4.4.1	Foundation Plan - Sheet 1	Design	
1	1	Bridges	T6 Tysons East Aerial Guideway	4.4.1	Foundation Plan - Sheet 2	Design	
1	1	Bridges	T6 Tysons East Aerial Guideway	4.4.1	Foundation Plan - Sheet 3	Design	
1	1	Bridges	T6 Tysons East Aerial Guideway	4.4.1	Foundation Plan - Sheet 4	Design	
1	1	Bridges	T6 Tysons East Aerial Guideway	4.4.1	Foundation Plan - Sheet 5	Design	
1	1	Bridges	T6 Tysons East Aerial Guideway	4.4.1	Foundation Plan - Sheet 6	Design	
1	1	Bridges	T6 Tysons East Aerial Guideway	4.4.1	Foundation Plan - Sheet 7	Design	
1	1	Bridges	T6 Tysons East Aerial Guideway	4.4.1	Foundation Plan - Sheet 8	Design	
1	1	Bridges	T6 Tysons East Aerial Guideway	4.4.1	Foundation Plan - Sheet 9	Design	
1	1	Bridges	T6 Tysons East Aerial Guideway	4.4.1	Caisson Details - Sheet 1	Design	
1	1	Bridges	T6 Tysons East Aerial Guideway	4.4.1	Caisson Details - Sheet 2	Design	
1	1	Bridges	T6 Tysons East Aerial Guideway	4.4.1	Abutment Plan, Elevation & Section	Design	
1	1	Bridges	T6 Tysons East Aerial Guideway	4.4.1	Wingwall Elevation & Sections	Design	
1	1	Bridges	T6 Tysons East Aerial Guideway	4.4.1	Abutment Foundation Plan & Details	Design	
1	1	Bridges	T6 Tysons East Aerial Guideway	4.4.1	Pier Type 1 - Single Track on Single Column: Plan, Elevation & Details	Design	

LVL 1	LVL 2	Discipline	Dwg Group		Drawing Description	Drawing Type	Drawing Count by Group
WBS				SOW Para	DESCRIPTION		
						Design, Diag. or Standard	SOW No.
					BRIDGES		
1	1	Bridges	T6 Tysons East Aerial Guideway	4.4.1	Pier Type 2 - Single Track on Cantilever Column Plan, Elevation & Details	Design	
1	1	Bridges	T6 Tysons East Aerial Guideway	4.4.1	Pier Type 3 - Pocket Track on Pier Bent: Plan, Elevation & Details	Design	
1	1	Bridges	T6 Tysons East Aerial Guideway	4.4.1	Pier Type 4 - Double Track on Hammer Head: Plan, Elevation & Details	Design	
1	1	Bridges	T6 Tysons East Aerial Guideway	4.4.1	Pier Type 5 - Pier Bent at Station: Plan, Elev & Detls	Design	
1	1	Bridges	T6 Tysons East Aerial Guideway	4.4.1	Segment Designations - Sheet 1	Design	
1	1	Bridges	T6 Tysons East Aerial Guideway	4.4.1	Segment Designations - Sheet 2	Design	
1	1	Bridges	T6 Tysons East Aerial Guideway	4.4.1	Segment Designations - Sheet 3	Design	
1	1	Bridges	T6 Tysons East Aerial Guideway	4.4.1	Segment Designations - Sheet 4	Design	
1	1	Bridges	T6 Tysons East Aerial Guideway	4.4.1	Segment Designations - Sheet 5	Design	
1	1	Bridges	T6 Tysons East Aerial Guideway	4.4.1	Segment Designations - Sheet 6	Design	
1	1	Bridges	T6 Tysons East Aerial Guideway	4.4.1	Segment Designations - Sheet 7	Design	
1	1	Bridges	T6 Tysons East Aerial Guideway	4.4.1	Segment Designations - Sheet 8	Design	
1	1	Bridges	T6 Tysons East Aerial Guideway	4.4.1	Segment Designations - Sheet 9	Design	
1	1	Bridges	T6 Tysons East Aerial Guideway	4.4.1	Typical Segment Dimensions	Design	
1	1	Bridges	T6 Tysons East Aerial Guideway	4.4.1	Variable Depth Segment Dimensions	Design	
1	1	Bridges	T6 Tysons East Aerial Guideway	4.4.1	Pier Segment Dimensions - Sheet 1	Design	
1	1	Bridges	T6 Tysons East Aerial Guideway	4.4.1	Pier Segment Dimensions - Sheet 2	Design	
1	1	Bridges	T6 Tysons East Aerial Guideway	4.4.1	Expansion Segment Dimensions - Sheet 1	Design	
1	1	Bridges	T6 Tysons East Aerial Guideway	4.4.1	Expansion Segment Dimensions - Sheet 2	Design	
1	1	Bridges	T6 Tysons East Aerial Guideway	4.4.1	P.S. Concrete Box Beam - Plan, Elev & Sections	Design	
1	1	Bridges	T6 Tysons East Aerial Guideway	4.4.1	P.S. Concrete Box Beam Pier Segment Details - 1	Design	
1	1	Bridges	T6 Tysons East Aerial Guideway	4.4.1	Deck Joint - 1	Design	
1	1	Bridges	T6 Tysons East Aerial Guideway	4.4.1	Erection Scheme - 1	Design	
1	1	Bridges	T6 Tysons East Aerial Guideway	4.4.1	Erection Scheme - 2	Design	
1	1	Bridges	T6 Tysons East Aerial Guideway	4.4.1	Erection Scheme - 3	Design	
1	1	Bridges	T6 Tysons East Aerial Guideway	4.4.1	Erection Scheme - 4	Design	
1	1	Bridges	T6 Tysons West Aerial Guideway	4.4.1	General Plan & Elevation (Key Plan)	Design	52
1	1	Bridges	T6 Tysons West Aerial Guideway	4.4.1	Plan & Elevation - Sheet 1	Design	
1	1	Bridges	T6 Tysons West Aerial Guideway	4.4.1	Plan & Elevation - Sheet 2	Design	
1	1	Bridges	T6 Tysons West Aerial Guideway	4.4.1	Plan & Elevation - Sheet 3	Design	
1	1	Bridges	T6 Tysons West Aerial Guideway	4.4.1	Plan & Elevation - Sheet 4	Design	
1	1	Bridges	T6 Tysons West Aerial Guideway	4.4.1	Plan & Elevation - Sheet 5	Design	
1	1	Bridges	T6 Tysons West Aerial Guideway	4.4.1	Plan & Elevation - Sheet 6	Design	
1	1	Bridges	T6 Tysons West Aerial Guideway	4.4.1	Plan & Elevation - Sheet 7	Design	
1	1	Bridges	T6 Tysons West Aerial Guideway	4.4.1	Plan & Elevation - Sheet 8	Design	
1	1	Bridges	T6 Tysons West Aerial Guideway	4.4.1	Plan & Elevation - Sheet 9	Design	
1	1	Bridges	T6 Tysons West Aerial Guideway	4.4.1	Plan & Elevation - Sheet 10	Design	
1	1	Bridges	T6 Tysons West Aerial Guideway	4.4.1	Plan & Elevation - Sheet 11	Design	
1	1	Bridges	T6 Tysons West Aerial Guideway	4.4.1	Profile - Sheet 1	Design	
1	1	Bridges	T6 Tysons West Aerial Guideway	4.4.1	Profile - Sheet 2	Design	
1	1	Bridges	T6 Tysons West Aerial Guideway	4.4.1	Typical Sections - Single Track	Design	
1	1	Bridges	T6 Tysons West Aerial Guideway	4.4.1	Typical Sections - Double Track	Design	
1	1	Bridges	T6 Tysons West Aerial Guideway	4.4.1	Typical Sections - Pocket Track	Design	
1	1	Bridges	T6 Tysons West Aerial Guideway	4.4.1	Typical Sections - Station	Design	
1	1	Bridges	T6 Tysons West Aerial Guideway	4.4.1	Typical Sections - Approach	Design	
1	1	Bridges	T6 Tysons West Aerial Guideway	4.4.1	Foundation Plan - Sheet 1	Design	
1	1	Bridges	T6 Tysons West Aerial Guideway	4.4.1	Foundation Plan - Sheet 2	Design	
1	1	Bridges	T6 Tysons West Aerial Guideway	4.4.1	Foundation Plan - Sheet 3	Design	
1	1	Bridges	T6 Tysons West Aerial Guideway	4.4.1	Foundation Plan - Sheet 4	Design	
1	1	Bridges	T6 Tysons West Aerial Guideway	4.4.1	Foundation Plan - Sheet 5	Design	
1	1	Bridges	T6 Tysons West Aerial Guideway	4.4.1	Caisson Details - Sheet 1	Design	
1	1	Bridges	T6 Tysons West Aerial Guideway	4.4.1	Caisson Details - Sheet 2	Design	
1	1	Bridges	T6 Tysons West Aerial Guideway	4.4.1	Abutment Plan, Elevation & Section	Design	
1	1	Bridges	T6 Tysons West Aerial Guideway	4.4.1	Wingwall Elevation & Sections	Design	
1	1	Bridges	T6 Tysons West Aerial Guideway	4.4.1	Abutment Foundation Plan & Details	Design	
1	1	Bridges	T6 Tysons West Aerial Guideway	4.4.1	Pier Type 1 - Single Track on Single Column: Plan, Elevation & Details	Design	
1	1	Bridges	T6 Tysons West Aerial Guideway	4.4.1	Pier Type 2 - Single Track on Cantilever Column Plan, Elevation & Details	Design	
1	1	Bridges	T6 Tysons West Aerial Guideway	4.4.1	Pier Type 3 - Pocket Track on Pier Bent: Plan, Elevation & Details	Design	
1	1	Bridges	T6 Tysons West Aerial Guideway	4.4.1	Pier Type 4 - Double Track on Hammer Head: Plan, Elevation & Details	Design	
1	1	Bridges	T6 Tysons West Aerial Guideway	4.4.1	Pier Type 5 - Pier Bent at Station: Plan, Elev & Detls	Design	

L V L 1	L V L 2	Discipline	Dwg Group		Drawing Description	Drawing Type	Drawing Count by Group
WBS				SOW Para	DESCRIPTION		
						Design, Diag. or Standard	SOW No.
					BRIDGES		
1	1	Bridges	T6 Tysons West Aerial Guideway	4.4.1	Segment Designations - Sheet 1	Design	
1	1	Bridges	T6 Tysons West Aerial Guideway	4.4.1	Segment Designations - Sheet 2	Design	
1	1	Bridges	T6 Tysons West Aerial Guideway	4.4.1	Segment Designations - Sheet 3	Design	
1	1	Bridges	T6 Tysons West Aerial Guideway	4.4.1	Segment Designations - Sheet 4	Design	
1	1	Bridges	T6 Tysons West Aerial Guideway	4.4.1	Segment Designations - Sheet 5	Design	
1	1	Bridges	T6 Tysons West Aerial Guideway	4.4.1	Typical Segment Dimensions	Design	
1	1	Bridges	T6 Tysons West Aerial Guideway	4.4.1	Variable Depth Segment Dimensions	Design	
1	1	Bridges	T6 Tysons West Aerial Guideway	4.4.1	Pier Segment Dimensions - Sheet 1	Design	
1	1	Bridges	T6 Tysons West Aerial Guideway	4.4.1	Pier Segment Dimensions - Sheet 2	Design	
1	1	Bridges	T6 Tysons West Aerial Guideway	4.4.1	Expansion Segment Dimensions - Sheet 1	Design	
1	1	Bridges	T6 Tysons West Aerial Guideway	4.4.1	Expansion Segment Dimensions - Sheet 2	Design	
1	1	Bridges	T6 Tysons West Aerial Guideway	4.4.1	P.S. Concrete Box Beam - Plan, Elev & Sections	Design	
1	1	Bridges	T6 Tysons West Aerial Guideway	4.4.1	P.S. Concrete Box Beam Pier Segment Details - 1	Design	
1	1	Bridges	T6 Tysons West Aerial Guideway	4.4.1	Deck Joint - 1	Design	
1	1	Bridges	T6 Tysons West Aerial Guideway	4.4.1	Erection Scheme - 1	Design	
1	1	Bridges	T6 Tysons West Aerial Guideway	4.4.1	Erection Scheme - 2	Design	
1	1	Bridges	T6 Tysons West Aerial Guideway	4.4.1	Erection Scheme - 3	Design	
1	1	Bridges	T6 Tysons West Aerial Guideway	4.4.1	Erection Scheme - 4	Design	
2	1	Bridges	A1 - Aerial Connector at Yard 15	4.4.1	Plan & Elevation - Sheet 1	Design	16
2	1	Bridges	A1 - Aerial Connector at Yard 15	4.4.1	Plan & Elevation - Sheet 2	Design	
2	1	Bridges	A1 - Aerial Connector at Yard 15	4.4.1	Plan & Elevation - Sheet 3	Design	
2	1	Bridges	A1 - Aerial Connector at Yard 15	4.4.1	Plan & Elevation - Sheet 4	Design	
2	1	Bridges	A1 - Aerial Connector at Yard 15	4.4.1	Plan & Elevation - Sheet 5	Design	
2	1	Bridges	A1 - Aerial Connector at Yard 15	4.4.1	Plan & Elevation - Sheet 6	Design	
2	1	Bridges	A1 - Aerial Connector at Yard 15	4.4.1	Plan & Elevation - Sheet 7	Design	
2	1	Bridges	A1 - Aerial Connector at Yard 15	4.4.1	Profile - Sheet 1 of 2	Design	
2	1	Bridges	A1 - Aerial Connector at Yard 15	4.4.1	Profile - Sheet 2 of 2	Design	
2	1	Bridges	A1 - Aerial Connector at Yard 15	4.4.1	Typical Sections - Single Track	Design	
2	1	Bridges	A1 - Aerial Connector at Yard 15	4.4.1	Typical Sections - Double Track	Design	
2	1	Bridges	A1 - Aerial Connector at Yard 15	4.4.1	Typical Sections - Approach	Design	
2	1	Bridges	A1 - Aerial Connector at Yard 15	4.4.1	Erection Scheme - 1	Design	
2	1	Bridges	A1 - Aerial Connector at Yard 15	4.4.1	Erection Scheme - 2	Design	
2	1	Bridges	A1 - Aerial Connector at Yard 15	4.4.1	Erection Scheme - 3	Design	
2	1	Bridges	A1 - Aerial Connector at Yard 15	4.4.1	Erection Scheme - 4	Design	
2	1	Bridges	A1 - Aerial Guideway at Airport	4.4.1	Plan & Elevation - Sheet 1	Design	18
2	1	Bridges	A1 - Aerial Guideway at Airport	4.4.1	Plan & Elevation - Sheet 2	Design	
2	1	Bridges	A1 - Aerial Guideway at Airport	4.4.1	Plan & Elevation - Sheet 3	Design	
2	1	Bridges	A1 - Aerial Guideway at Airport	4.4.1	Plan & Elevation - Sheet 4	Design	
2	1	Bridges	A1 - Aerial Guideway at Airport	4.4.1	Plan & Elevation - Sheet 5	Design	
2	1	Bridges	A1 - Aerial Guideway at Airport	4.4.1	Plan & Elevation - Sheet 6	Design	
2	1	Bridges	A1 - Aerial Guideway at Airport	4.4.1	Plan & Elevation - Sheet 7	Design	
2	1	Bridges	A1 - Aerial Guideway at Airport	4.4.1	Plan & Elevation - Sheet 8	Design	
2	1	Bridges	A1 - Aerial Guideway at Airport	4.4.1	Profile - Sheet 1 of 2	Design	
2	1	Bridges	A1 - Aerial Guideway at Airport	4.4.1	Profile - Sheet 2 of 2	Design	
2	1	Bridges	A1 - Aerial Guideway at Airport	4.4.1	Typical Sections - Single Track	Design	
2	1	Bridges	A1 - Aerial Guideway at Airport	4.4.1	Typical Sections - Double Track	Design	
2	1	Bridges	A1 - Aerial Guideway at Airport	4.4.1	Typical Sections - Pocket Track	Design	
2	1	Bridges	A1 - Aerial Guideway at Airport	4.4.1	Typical Sections - Approach	Design	
2	1	Bridges	A1 - Aerial Guideway at Airport	4.4.1	Erection Scheme - 1	Design	
2	1	Bridges	A1 - Aerial Guideway at Airport	4.4.1	Erection Scheme - 2	Design	
2	1	Bridges	A1 - Aerial Guideway at Airport	4.4.1	Erection Scheme - 3	Design	
2	1	Bridges	A1 - Aerial Guideway at Airport	4.4.1	Erection Scheme - 4	Design	
2	1	Bridges	Crashwalls	4.4.1	Plan & Elevations Sht 1	Design	9
2	1	Bridges	Crashwalls	4.4.1	Plan & Elevations Sht 2	Design	
2	1	Bridges	Crashwalls	4.4.1	Plan & Elevations Sht 3	Design	
2	1	Bridges	Crashwalls	4.4.1	Plan & Elevations Sht 4	Design	
2	1	Bridges	Crashwalls	4.4.1	Plan & Elevations Sht 5	Design	
2	1	Bridges	Crashwalls	4.4.1	Plan & Elevations Sht 6	Design	
2	1	Bridges	Crashwalls	4.4.1	Plan & Elevations Sht 7	Design	
2	1	Bridges	Crashwalls	4.4.1	Plan & Elevations Sht 8	Design	
2	1	Bridges	Crashwalls	4.4.1	Plan & Elevations Sht 9	Design	
2	1	Bridges	D1 over Centerville Road Bridge	4.4.1	General Plan & Elevation	Design	3
2	1	Bridges	D1 over Centerville Road Bridge	4.4.1	Profile	Design	
2	1	Bridges	D1 over Centerville Road Bridge	4.4.1	Typical Sections	Design	
2	1	Bridges	D1 over Horsepen Run Bridge	4.4.1	General Plan & Elevation	Design	3
2	1	Bridges	D1 over Horsepen Run Bridge	4.4.1	Profile	Design	
2	1	Bridges	D1 over Horsepen Run Bridge	4.4.1	Typical Sections	Design	

LVL 1	LVL 2	Discipline	Dwg Group		Drawing Description	Drawing Type	Drawing Count by Group
WBS				SOW Para	DESCRIPTION		
						Design, Diag. or Standard	SOW No.
					BRIDGES		
2	1	Bridges	General Drawings	4.4.1	Index of Drawings	Design	4
2	1	Bridges	General Drawings	4.4.1	General Notes - I	Design	
2	1	Bridges	General Drawings	4.4.1	General Notes - II	Design	
2	1	Bridges	General Drawings	4.4.1	Abbreviations and Symboles	Design	
2	1	Bridges	L1 over Broad Run Bridge	4.4.1	General Plan & Elevation	Design	3
2	1	Bridges	L1 over Broad Run Bridge	4.4.1	Profile	Design	
2	1	Bridges	L1 over Broad Run Bridge	4.4.1	Typical Sections	Design	
				4.4.1 Total			308
				Grand Total			308

LVL 1	LVL 2	Discipline	Dwg Group		Drawing Description	Drawing Type	Drawing Count by Group
WBS				SOW Para	DESCRIPTION		
						Design, Diag. or Standard	SOW No.
					CIVIL		
					Design Drawings - Total		742
					4.2.1 Total		14
					4.2.2 Total		146
					4.2.3 Total		38
					4.2.4 Total		218
					4.2.5 Total		166
					4.2.6 Total		108
					4.2.7 Total		14
					4.2.8 Total		11
					4.2.10 Total		27
1	1	Civil	Survey Drawings	4.2.1	Survey Control Points Plan (1"=400')	Design	14
1	1	Civil	Survey Drawings	4.2.1	Survey Control Points Plan (1"=400')	Design	
1	1	Civil	Survey Drawings	4.2.1	Survey Control Points Plan (1"=400')	Design	
1	1	Civil	Survey Drawings	4.2.1	Survey Control Points Plan (1"=400')	Design	
1	1	Civil	Survey Drawings	4.2.1	Survey Control Points Plan (1"=400')	Design	
2	1	Civil	Survey Drawings	4.2.1	Survey Control Points Plan (1"=400')	Design	
2	1	Civil	Survey Drawings	4.2.1	Survey Control Points Plan (1"=400')	Design	
2	1	Civil	Survey Drawings	4.2.1	Survey Control Points Plan (1"=400')	Design	
2	1	Civil	Survey Drawings	4.2.1	Survey Control Points Plan (1"=400')	Design	
2	1	Civil	Survey Drawings	4.2.1	Survey Control Points Plan (1"=400')	Design	
2	1	Civil	Survey Drawings	4.2.1	Survey Control Points Plan (1"=400')	Design	
2	1	Civil	Survey Drawings	4.2.1	Survey Control Points Plan (1"=400')	Design	
2	1	Civil	Survey Drawings	4.2.1	Survey Control Points Plan (1"=400')	Design	
2	1	Civil	Survey Drawings	4.2.1	Survey Control Points Plan (1"=400')	Design	
				4.2.1 Total			14
1	1	Civil	Right of Way Drawings	4.2.2	Right of Way Plan Sta. 556+00 to Sta. 566+00	Design	66
1	1	Civil	Right of Way Drawings	4.2.2	Right of Way Plan Sta.727+00 to Sta.738+00	Design	
1	1	Civil	Right of Way Drawings	4.2.2	Right of Way Plan Sta.738+00 to Sta. 749+00 North Side	Design	
1	1	Civil	Right of Way Drawings	4.2.2	Right of Way Plan Sta.738+00 to Sta. 749+00 South Side	Design	
1	1	Civil	Right of Way Drawings	4.2.2	Right of Way Plan Sta.749+00 to Sta. 760-+00 North Side	Design	
1	1	Civil	Right of Way Drawings	4.2.2	Right of Way Plan Sta.749+00 to Sta. 760+00 South Side	Design	
1	1	Civil	Right of Way Drawings	4.2.2	Right of Way Plan Sta. 760+00 to Sta. 771+00 North Side	Design	
1	1	Civil	Right of Way Drawings	4.2.2	Right of Way Plan Sta. 760+00 to Sta. 771+00 South Side	Design	
1	1	Civil	Right of Way Drawings	4.2.2	Right of Way Plan Sta.771+00 to Sta. 782-+00	Design	
1	1	Civil	Right of Way Drawings	4.2.2	Right of Way Plan Sta. 782+00 to Sta.793+00	Design	
1	1	Civil	Right of Way Drawings	4.2.2	Right of Way Plan Sta. 793+00 to Sta. 804+00	Design	
1	1	Civil	Right of Way Drawings	4.2.2	Right of Way Plan Sta. 804+00 to Sta. 815+00	Design	
1	1	Civil	Right of Way Drawings	4.2.2	Right of Way Plan Sta. 815+00 to Sta. 826+00	Design	
1	1	Civil	Right of Way Drawings	4.2.2	Right of Way Plan Sta. 826+00 to Sta. 837+00	Design	
1	1	Civil	Right of Way Drawings	4.2.2	Right of Way Plan Sta. 837+00 to Sta. 848+00	Design	
1	1	Civil	Right of Way Drawings	4.2.2	Right of Way Plan Sta. 848+00 to Sta. 859+00	Design	
1	1	Civil	Right of Way Drawings	4.2.2	Right of Way Plan Sta. 859+00 to Sta. 870+00	Design	
1	1	Civil	Right of Way Drawings	4.2.2	Right of Way Plan Sta. 870+00 to Sta. 881+00	Design	
1	1	Civil	Right of Way Drawings	4.2.2	Right of Way Plan Sta. 881+00 to Sta. 892+00	Design	
1	1	Civil	Right of Way Drawings	4.2.2	Right of Way Plan Sta. 892+00 to Sta. 903+00	Design	
1	1	Civil	Right of Way Drawings	4.2.2	Right of Way Plan Sta.903+00 to Sta. 914+00	Design	
1	1	Civil	Right of Way Drawings	4.2.2	Right of Way Plan Sta. 914+00 to Sta.925+00	Design	
1	1	Civil	Right of Way Drawings	4.2.2	Right of Way Plan Sta. 925+00 to Sta. 936+00	Design	
1	1	Civil	Right of Way Drawings	4.2.2	Right of Way Plan Sta. 936+00 to Sta. 947+00	Design	
1	1	Civil	Right of Way Drawings	4.2.2	Right of Way Plan Sta. 947+00 to Sta. 958+00	Design	
1	1	Civil	Right of Way Drawings	4.2.2	Right of Way Plan Sta. 958+00 to Sta. 969+00	Design	
1	1	Civil	Right of Way Drawings	4.2.2	Right of Way Plan Sta. 969+00 to Sta. 980+00	Design	
1	1	Civil	Right of Way Drawings	4.2.2	Right of Way Plan Sta. 980+00 to Sta. 991+00	Design	
1	1	Civil	Right of Way Drawings	4.2.2	Right of Way Plan Sta. 991+00 to Sta. 1002+00	Design	
1	1	Civil	Right of Way Drawings	4.2.2	Right of Way Plan Sta. 1002+00 to Sta. 1013+00	Design	
1	1	Civil	Right of Way Drawings	4.2.2	Right of Way Plan Sta. 1013+00 to Sta. 1024+00	Design	
1	1	Civil	Right of Way Drawings	4.2.2	Right of Way Plan Sta. 1024+00 to Sta. 1035+00	Design	
1	1	Civil	Right of Way Drawings	4.2.2	Right of Way Plan Sta. 1035+00 to Sta. 1046+00	Design	
1	1	Civil	Right of Way Drawings	4.2.2	Right of Way Plan Sta. 1046+00 to Sta. 1057+00	Design	
1	1	Civil	Right of Way Drawings	4.2.2	Right of Way Plan Sta. 1057+00 to Sta.1068+00	Design	
1	1	Civil	Right of Way Drawings	4.2.2	Right of Way Plan Sta. 1068+00 to Sta. 1079+00	Design	
1	1	Civil	Right of Way Drawings	4.2.2	Right of Way Plan Sta. 1079+00 to Sta. 1090+00	Design	
1	1	Civil	Right of Way Drawings	4.2.2	Right of Way Plan Sta. 1090+00 to Sta.1101+00	Design	
1	1	Civil	Right of Way Drawings	4.2.2	Right of Way Plan Sta.1101+00 to Sta. 1112+00	Design	
1	1	Civil	Right of Way Drawings	4.2.2	Right of Way Plan Sta. 1112+00 to Sta. 1123+00	Design	
1	1	Civil	Right of Way Drawings	4.2.2	Right of Way Plan Sta. 1123+00 to Sta. 1134+00	Design	
1	1	Civil	Right of Way Drawings	4.2.2	Right of Way Plan Sta. 1134+00 to Sta. 1145+00	Design	
1	1	Civil	Right of Way Drawings	4.2.2	Right of Way Plan Sta. 1145+00 to Sta. 1156-+00	Design	

LVL 1	LVL 2	Discipline	Dwg Group		Drawing Description	Drawing Type	Drawing Count by Group
WBS				SOW Para	DESCRIPTION		
						Design, Diag. or Standard	SOW No.
					CIVIL		
1	1	Civil	Right of Way Drawings	4.2.2	Right of Way Plan Sta.1156+00 to Sta. 1167+00	Design	
1	1	Civil	Right of Way Drawings	4.2.2	Right of Way Plan Sta. 1167+00 to Sta. 1178-+00	Design	
1	1	Civil	Right of Way Drawings	4.2.2	Right of Way Plan Sta. 1178+00 to Sta. 1189+00	Design	
1	1	Civil	Right of Way Drawings	4.2.2	Right of Way Plan Sta. 1189+00 to Sta.1200+00	Design	
1	1	Civil	Right of Way Drawings	4.2.2	Right of Way Plan Sta. 1200+00 to Sta. 1211+00	Design	
1	1	Civil	Right of Way Drawings	4.2.2	Right of Way Plan Sta. 1211+00 to Sta. 1222+00	Design	
1	1	Civil	Right of Way Drawings	4.2.2	Right of Way Plan Sta. 1222+00 to Sta. 1233+00	Design	
1	1	Civil	Right of Way Drawings	4.2.2	Right of Way Plan Sta. 1233+00 to Sta. 1244+00	Design	
1	1	Civil	Right of Way Drawings	4.2.2	Right of Way Plan Sta. 1244+00 to Sta. 1255+00	Design	
1	1	Civil	Right of Way Drawings	4.2.2	Right of Way Plan Sta. 1255+00 to Sta. 1266+00	Design	
1	1	Civil	Right of Way Drawings	4.2.2	Right of Way Plan Sta. 1266+00 to Sta. 1277+00	Design	
1	1	Civil	Right of Way Drawings	4.2.2	Right of Way Plan Sta. 1277+00 to Sta. 1288+00	Design	
1	1	Civil	Right of Way Drawings	4.2.2	Right of Way Plan Sta. 1288+00 to Sta. 1299+00	Design	
1	1	Civil	Right of Way Drawings	4.2.2	Right of Way Plan Sta. 1299+00 to Sta. 1310+00	Design	
1	1	Civil	Right of Way Drawings	4.2.2	Right of Way Plan Sta. 1310+00 to Sta. 1321+00	Design	
1	1	Civil	Right of Way Drawings	4.2.2	Right of Way Plan Sta. 1321+00 to Sta. 1332+00	Design	
1	2	Civil	Right of Way Drawings	4.2.2	Right of Way Plan at West Falls Church Yard	Design	
1	3	Civil	Right of Way Drawings	4.2.2	Right of Way Plan at Tyson East Station	Design	
1	3	Civil	Right of Way Drawings	4.2.2	Right of Way Plan at Tyson Central "c" Station	Design	
1	3	Civil	Right of Way Drawings	4.2.2	Right of Way Plan at Tyson Central "D" Station	Design	
1	3	Civil	Right of Way Drawings	4.2.2	Right of Way Plan at Tyson West Station	Design	
1	3	Civil	Right of Way Drawings	4.2.2	Right of Way Plan at Tyson West Station	Design	
1	3	Civil	Right of Way Drawings	4.2.2	Right of Way Plan at Wiehle Avenue Station	Design	
1	3	Civil	Temporary Construction Dwgs	4.2.2	Temporary Constr. Right of Way Plan at Stations sht.1 of 5	Design	5
1	3	Civil	Temporary Construction Dwgs	4.2.2	Temporary Constr. Right of Way Plan at Stations sht.2 of 5	Design	
1	3	Civil	Temporary Construction Dwgs	4.2.2	Temporary Constr. Right of Way Plan at Stations sht.3 of 5	Design	
1	3	Civil	Temporary Construction Dwgs	4.2.2	Temporary Constr. Right of Way Plan at Stations sht.4 of 5	Design	
1	3	Civil	Temporary Construction Dwgs	4.2.2	Temporary Constr. Right of Way Plan at Stations sht.5 of 5	Design	
2	1	Civil	Right of Way Drawings	4.2.2	Right of Way - Plan Sta.1332+00 to Sta. 1343+00	Design	75
2	1	Civil	Right of Way Drawings	4.2.2	Right of Way - Plan Sta.1343+00 to Sta. 1354+00	Design	
2	1	Civil	Right of Way Drawings	4.2.2	Right of Way - Plan Sta. 1354+00 to Sta. 1365+00	Design	
2	1	Civil	Right of Way Drawings	4.2.2	Right of Way - Plan Sta.1365+00 to Sta. 1376-+00	Design	
2	1	Civil	Right of Way Drawings	4.2.2	Right of Way - Plan Sta. 1376+00 to Sta.1387+00	Design	
2	1	Civil	Right of Way Drawings	4.2.2	Right of Way - Plan Sta.1387+00 to Sta. 1398+00	Design	
2	1	Civil	Right of Way Drawings	4.2.2	Right of Way - Plan Sta. 1398+00 to Sta. 1409+00	Design	
2	1	Civil	Right of Way Drawings	4.2.2	Right of Way - Plan Sta. 1409-+00 to Sta. 1420+00	Design	
2	1	Civil	Right of Way Drawings	4.2.2	Right of Way - Plan Sta. 1420+00 to Sta. 1431+00	Design	
2	1	Civil	Right of Way Drawings	4.2.2	Right of Way - Plan Sta. 1431+00 to Sta. 1442+00	Design	
2	1	Civil	Right of Way Drawings	4.2.2	Right of Way - Plan Sta. 1442+00 to Sta. 1453+00	Design	
2	1	Civil	Right of Way Drawings	4.2.2	Right of Way - Plan Sta. 1453+00 to Sta. 1464+00	Design	
2	1	Civil	Right of Way Drawings	4.2.2	Right of Way - Plan Sta.1464+00 to Sta. 1475+00	Design	
2	1	Civil	Right of Way Drawings	4.2.2	Right of Way - Plan Sta. 1475+00 to Sta. 1486+00	Design	
2	1	Civil	Right of Way Drawings	4.2.2	Right of Way - Plan Sta. 1486+00 to Sta.1497+00	Design	
2	1	Civil	Right of Way Drawings	4.2.2	Right of Way - Plan Sta.1497+00 to Sta. 1508+00	Design	
2	1	Civil	Right of Way Drawings	4.2.2	Right of Way - Plan Sta.1508+00 to Sta.1519+00	Design	
2	1	Civil	Right of Way Drawings	4.2.2	Right of Way - Plan Sta. 1519+00 to Sta. 1530+00	Design	
2	1	Civil	Right of Way Drawings	4.2.2	Right of Way - Plan Sta. 1530+00 to Sta. 1541+00	Design	
2	1	Civil	Right of Way Drawings	4.2.2	Right of Way - Plan Sta. 1541+00 to Sta. 1552+00	Design	
2	1	Civil	Right of Way Drawings	4.2.2	Right of Way - Plan Sta. 1552+00 to Sta. 1563+00	Design	
2	1	Civil	Right of Way Drawings	4.2.2	Right of Way - Plan Sta. 1563+00 to Sta. 1574+00	Design	
2	1	Civil	Right of Way Drawings	4.2.2	Right of Way - Plan Sta. 1574+00 to Sta. 1585+00	Design	
2	1	Civil	Right of Way Drawings	4.2.2	Right of Way - Plan Sta. 1585+00 to Sta. 1596+00	Design	
2	1	Civil	Right of Way Drawings	4.2.2	Right of Way - Plan Sta. 1596+00 to Sta. 1607+00	Design	
2	1	Civil	Right of Way Drawings	4.2.2	Right of Way - Plan Sta. 1607+00 to Sta. 1618+00	Design	
2	1	Civil	Right of Way Drawings	4.2.2	Right of Way - Plan Sta. 1618+00 to Sta. 1629+00	Design	
2	1	Civil	Right of Way Drawings	4.2.2	Right of Way - Plan Sta. 1629+00 to Sta. 1640+00	Design	
2	1	Civil	Right of Way Drawings	4.2.2	Right of Way - Plan Sta. 1640+00 to Sta. 1651+00	Design	
2	1	Civil	Right of Way Drawings	4.2.2	Right of Way - Plan Sta. 1651+00 to Sta.1662+00	Design	
2	1	Civil	Right of Way Drawings	4.2.2	Right of Way - Plan Sta. 1662+00 to Sta. 1673+00	Design	
2	1	Civil	Right of Way Drawings	4.2.2	Right of Way - Plan Sta. 1673+00 to Sta. 1684+00	Design	
2	1	Civil	Right of Way Drawings	4.2.2	Right of Way - Plan Sta. 1684+00 to Sta.1695+00	Design	
2	1	Civil	Right of Way Drawings	4.2.2	Right of Way - Plan Sta.1695+00 to Sta. 1706+00	Design	
2	1	Civil	Right of Way Drawings	4.2.2	Right of Way - Plan Sta. 1706+00 to Sta. 1717+00	Design	
2	1	Civil	Right of Way Drawings	4.2.2	Right of Way - Plan Sta. 1717+00 to Sta. 1728+00	Design	
2	1	Civil	Right of Way Drawings	4.2.2	Right of Way - Plan Sta. 1728+00 to Sta. 1739+00	Design	
2	1	Civil	Right of Way Drawings	4.2.2	Right of Way - Plan Sta. 1739+00 to Sta. 1750+00	Design	
2	1	Civil	Right of Way Drawings	4.2.2	Right of Way - Plan Sta.1750+00 to Sta. 1761+00	Design	
2	1	Civil	Right of Way Drawings	4.2.2	Right of Way - Plan Sta. 1761+00 to Sta. 1772+00	Design	
2	1	Civil	Right of Way Drawings	4.2.2	Right of Way - Plan Sta. 1772+00 to Sta. 1783+00	Design	
2	1	Civil	Right of Way Drawings	4.2.2	Right of Way - Plan Sta. 1783+00 to Sta.1794+00	Design	
2	1	Civil	Right of Way Drawings	4.2.2	Right of Way - Plan Sta. 1794+00 to Sta. 1805+00	Design	
2	1	Civil	Right of Way Drawings	4.2.2	Right of Way - Plan Sta. 1805+00 to Sta. 1816+00	Design	
2	1	Civil	Right of Way Drawings	4.2.2	Right of Way - Plan Sta. 1816+00 to Sta. 1827+00	Design	
2	1	Civil	Right of Way Drawings	4.2.2	Right of Way - Plan Sta. 1827+00 to Sta. 1838+00	Design	
2	1	Civil	Right of Way Drawings	4.2.2	Right of Way - Plan Sta. 1838+00 to Sta. 1849+00	Design	

LVL 1	LVL 2	Discipline	Dwg Group		Drawing Description	Drawing Type	Drawing Count by Group
WBS				SOW Para	DESCRIPTION		
						Design, Diag. or Standard	SOW No.
					CIVIL		
2	1	Civil	Right of Way Drawings	4.2.2	Right of Way - Plan Sta. 1849+00 to Sta. 1860+00	Design	
2	1	Civil	Right of Way Drawings	4.2.2	Right of Way - Plan Sta. 1860+00 to Sta. 1871+00	Design	
2	1	Civil	Right of Way Drawings	4.2.2	Right of Way - Plan Sta. 1871+00 to Sta. 1882+00	Design	
2	1	Civil	Right of Way Drawings	4.2.2	Right of Way - Plan Sta. 1882+00 to Sta. 1893+00	Design	
2	1	Civil	Right of Way Drawings	4.2.2	Right of Way - Plan Sta. 1893+00 to Sta. 1904+00	Design	
2	1	Civil	Right of Way Drawings	4.2.2	Right of Way - Plan Sta. 1904+00 to Sta. 1915+00	Design	
2	1	Civil	Right of Way Drawings	4.2.2	Right of Way - Plan Sta. 1915+00 to Sta. 1926+00	Design	
2	1	Civil	Right of Way Drawings	4.2.2	Right of Way - Plan Sta. 1926+00 to Sta. 1937+00	Design	
2	1	Civil	Right of Way Drawings	4.2.2	Right of Way - Plan Sta. 1937+00 to Sta. 1947+09.36	Design	
2	2	Civil	Right of Way Drawings	4.2.2	Right of Way Plan Conect, to Yard 15 Connection Sta. 15716+00 to Sta. 15727+00	Design	
2	2	Civil	Right of Way Drawings	4.2.2	Right of Way Plan Conect, to Yard 15 Connection Sta. 15727+00 to Sta. 15738+00	Design	
2	2	Civil	Right of Way Drawings	4.2.2	Right of Way Plan Conect, to Yard 15 Connection Sta. 15738+00 to Sta. 15749+00	Design	
2	2	Civil	Right of Way Drawings	4.2.2	Right of Way Plan Conect, to Yard 15 Connection Sta. 15749+00 to Sta. 15760+00	Design	
2	2	Civil	Right of Way Drawings	4.2.2	Right of Way Plan Conect, to Yard 15 Connection Sta. 15760+00 to Sta. 15771+00	Design	
2	2	Civil	Right of Way Drawings	4.2.2	Right of Way Plan Conect, to Yard 15 Connection Sta. 1577+00.00 to Sta. 1580+04.13 - East Lead	Design	
2	3	Civil	Right of Way Drawings	4.2.2	Right of Way Plan Reston Parkway Station North Plaza	Design	
2	3	Civil	Right of Way Drawings	4.2.2	Right of Way Plan Reston Parkway Station South Plaza	Design	
2	3	Civil	Right of Way Drawings	4.2.2	Right of Way Plan Herndon Monror Station North Plaza	Design	
2	3	Civil	Right of Way Drawings	4.2.2	Right of Way Plan Herndon Monror Station South Plaza	Design	
2	3	Civil	Right of Way Drawings	4.2.2	Right of Way Plan Route 28 Station North Plaza	Design	
2	3	Civil	Right of Way Drawings	4.2.2	Right of Way Plan Route 28 Station South Plaza	Design	
2	3	Civil	Right of Way Drawings	4.2.2	Right of Way Plan Route 606 Station Sht 1 of 2	Design	
2	3	Civil	Right of Way Drawings	4.2.2	Right of Way Plan Route 606 Station Sht 2 of 2	Design	
2	3	Civil	Right of Way Drawings	4.2.2	Right of Way Plan Route 772 Station Sht 1 of 2	Design	
2	3	Civil	Right of Way Drawings	4.2.2	Right of Way Plan Route 772 Station Sht 2 of 2	Design	
2	3	Civil	Right of Way Drawings	4.2.2	Right of Way Plan Rail Yard and Shop Sht, 1 of 3	Design	
2	3	Civil	Right of Way Drawings	4.2.2	Right of Way Plan Rail Yard and Shop Sht, 2 of 3	Design	
2	3	Civil	Right of Way Drawings	4.2.2	Right of Way Plan Rail Yard and Shop Sht, 3 of 3	Design	
				4.2.2 Total			146
1	1	Civil	Geotech Drawings	4.2.3	Geotech Key Plan	Design	38
1	1	Civil	Geotech Drawings	4.2.3	Geotech General Notes	Design	
1	1	Civil	Geotech Drawings	4.2.3	Geotech Boring and Test Pits Excav. Schedule Sht.1 of 2	Design	
1	1	Civil	Geotech Drawings	4.2.3	Geotech Boring and Test Pits Excav. Schedule Sht.2 of 2	Design	
1	1	Civil	Geotech Drawings	4.2.3	Geotech Boring Location Plan(1"=200') Sta. 556+00 to Sta. 566+00 and Sta.727+00 to Sta.771+00	Design	
1	1	Civil	Geotech Drawings	4.2.3	Geotech Boring Location Plan(1"=200') Sta.771+00 to Sta. 825+00	Design	
1	1	Civil	Geotech Drawings	4.2.3	Geotech Boring Location Plan(1"=200') Sta. 825+00 to Sta. 879+00	Design	
1	1	Civil	Geotech Drawings	4.2.3	Geotech Boring Location Plan(1"=200') Sta. 879+00 to Sta.933+00	Design	
1	1	Civil	Geotech Drawings	4.2.3	Geotech Boring Location Plan(1"=200') Sta.933+00 to Sta.987+00	Design	
1	1	Civil	Geotech Drawings	4.2.3	Geotech Boring Location Plan(1"=200') Sta.987+00 to Sta.1041+00	Design	
1	1	Civil	Geotech Drawings	4.2.3	Geotech Boring Location Plan(1"=200') Sta.1041+00 to Sta. 1095+00	Design	
1	1	Civil	Geotech Drawings	4.2.3	Geotech Boring Location Plan (1"=200') Sta.1095+00 to Sta. 1149+00	Design	
1	1	Civil	Geotech Drawings	4.2.3	Geotech Boring Location Plan(1"=200') Sta. 1149+00 to Sta. 1203+00	Design	
1	1	Civil	Geotech Drawings	4.2.3	Geotech Boring Location Plan (1"=200') Sta. 1203+00 to Sta. 1257+00	Design	
1	1	Civil	Geotech Drawings	4.2.3	Geotech Boring Location Plan (1"=200') Sta.1257+00 to Sta. 1311+00	Design	
1	1	Civil	Geotech Drawings	4.2.3	Geotech Boring Location Plan (1"=200') Sta.1311+00 to Sta. 1332+00	Design	
1	3	Civil	Geotech Drawings	4.2.3	Geotech Boring Locat. Pln.(1"=200') at Stations Sht 1 of 3	Design	
1	3	Civil	Geotech Drawings	4.2.3	Geotech Boring Locat. Pln.(1"=200') at Stations Sht 2 of 3	Design	
1	3	Civil	Geotech Drawings	4.2.3	Geotech Boring Locat. Pln.(1"=200') at Stations Sht 3 of 3	Design	
2	1	Civil	Geotech Drawings	4.2.3	Geotech Key Plan	Design	
2	1	Civil	Geotech Drawings	4.2.3	Geotech General Notes	Design	
2	1	Civil	Geotech Drawings	4.2.3	Geotech Boring and Test Pits Excav. Schedule Sht.1 of 2	Design	
2	1	Civil	Geotech Drawings	4.2.3	Geotech Boring and Test Pits Excav. Schedule Sht.2 of 2	Design	
2	1	Civil	Geotech Drawings	4.2.3	Geotech Boring Location Plan(1"=200') Sta.1332+00 to Sta. 1386+00	Design	
2	1	Civil	Geotech Drawings	4.2.3	Geotech Boring Location Plan(1"=200') Sta.1386+00 to Sta. 1440+00	Design	
2	1	Civil	Geotech Drawings	4.2.3	Geotech Boring Location Plan(1"=200') Sta.1440+00 to Sta. 1494+00	Design	
2	1	Civil	Geotech Drawings	4.2.3	Geotech Boring Location Plan(1"=200') Sta.1494+00 to Sta. 1548+00	Design	
2	1	Civil	Geotech Drawings	4.2.3	Geotech Boring Location Plan(1"=200') Sta.1548+00 to Sta.1602+00	Design	
2	1	Civil	Geotech Drawings	4.2.3	Geotech Boring Location Plan (1"=200') Sta.1602+00 to Sta. 1656+00	Design	
2	1	Civil	Geotech Drawings	4.2.3	Geotech Boring Location Plan (1"=200') Sta. 1656+00 to Sta. 1640+00	Design	
2	1	Civil	Geotech Drawings	4.2.3	Geotech Boring Location Plan (1"=200') Sta. 1640+00 to Sta. 1710+00	Design	
2	1	Civil	Geotech Drawings	4.2.3	Geotech Boring Location Plan (1"=200') Sta. 1710+00 to Sta. 1764+00	Design	
2	1	Civil	Geotech Drawings	4.2.3	Geotech Boring Location Plan (1"=200') Sta. 1764+00 to Sta. 1818+00	Design	
2	1	Civil	Geotech Drawings	4.2.3	Geotech Boring Location Plan (1"=200') Sta. 1818+00 to Sta. 1872+00	Design	
2	1	Civil	Geotech Drawings	4.2.3	Geotech Boring Location Plan (1"=200') Sta. 1872+00 to Sta. 1926+00	Design	
2	1	Civil	Geotech Drawings	4.2.3	Geotech Boring Location Plan (1"=200') Sta. 1926+00 to Sta. 1947+09.32	Design	
2	1	Civil	Geotech Drawings	4.2.3	Geotech Boring Location Plan (1"=200') Sta. 15716+00 to Sta. 15772+00	Design	
2	1	Civil	Geotech Drawings	4.2.3	Geotech Boring Location Plan (1"=200') Sta. 15772+00 to Sta. 15783+00 and Sta. 1926+00 to Sta. 1947+09.	Design	

LVL 1	LVL 2	Discipline	Dwg Group		Drawing Description	Drawing Type	Drawing Count by Group
WBS				SOW Para	DESCRIPTION		
						Design, Diag. or Standard	SOW No.
					CIVIL		
				4.2.3 Total			38
1	1	Civil	Composite Utilities	4.2.4	Composite Plans of New and Modified Utilities Sta. 556+00 to Sta. 566+00	Design	90
1	1	Civil	Composite Utilities	4.2.4	Composite Plans of New and Modified Utilities Sta.727+00 to Sta.738+00	Design	
1	1	Civil	Composite Utilities	4.2.4	Composite Plans of New and Modified Utilities Sta.738+00 to Sta. 749+00	Design	
1	1	Civil	Composite Utilities	4.2.4	Composite Plans of New and Modified Utilities Sta.749+00 to Sta. 760-+00	Design	
1	1	Civil	Composite Utilities	4.2.4	Composite Plans of New and Modified Utilities Sta. 760+00 to Sta. 771+00	Design	
1	1	Civil	Composite Utilities	4.2.4	Composite Plans of New and Modified Utilities Sta.771+00 to Sta. 782-+00	Design	
1	1	Civil	Composite Utilities	4.2.4	Composite Plans of New and Modified Utilities Sta. 782+00 to Sta.793+00	Design	
1	1	Civil	Composite Utilities	4.2.4	Composite Plans of New and Modified Utilities Sta. 793+00 to Sta. 804+00	Design	
1	1	Civil	Composite Utilities	4.2.4	Composite Plans of New and Modified Utilities Sta. 804+00 to Sta. 815+00	Design	
1	1	Civil	Composite Utilities	4.2.4	Composite Plans of New and Modified Utilities Sta. 815-+00 to Sta. 826+00	Design	
1	1	Civil	Composite Utilities	4.2.4	Composite Plans of New and Modified Utilities Sta. 826-+00 to Sta. 837+00	Design	
1	1	Civil	Composite Utilities	4.2.4	Composite Plans of New and Modified Utilities Sta. 837+00 to Sta. 848-+00	Design	
1	1	Civil	Composite Utilities	4.2.4	Composite Plans of New and Modified Utilities Sta. 848+00 to Sta. 859+00	Design	
1	1	Civil	Composite Utilities	4.2.4	Composite Plans of New and Modified Utilities Sta. 859+00 to Sta. 870+00	Design	
1	1	Civil	Composite Utilities	4.2.4	Composite Plans of New and Modified Utilities Sta. 870+00 to Sta. 881+00	Design	
1	1	Civil	Composite Utilities	4.2.4	Composite Plans of New and Modified Utilities Sta. 881+00 to Sta. 892+00	Design	
1	1	Civil	Composite Utilities	4.2.4	Composite Plans of New and Modified Utilities Sta. 892+00 to Sta. 903+00	Design	
1	1	Civil	Composite Utilities	4.2.4	Composite Plans of New and Modified Utilities Sta. 903+00 to Sta. 914+00	Design	
1	1	Civil	Composite Utilities	4.2.4	Composite Plans of New and Modified Utilities Sta. 914+00 to Sta.925+00	Design	
1	1	Civil	Composite Utilities	4.2.4	Composite Plans of New and Modified Utilities Sta. 925+00 to Sta. 936-+00	Design	
1	1	Civil	Composite Utilities	4.2.4	Composite Plans of New and Modified Utilities Sta. 936+00 to Sta. 947+00	Design	
1	1	Civil	Composite Utilities	4.2.4	Composite Plans of New and Modified Utilities Sta. 947-+00 to Sta. 958+00	Design	
1	1	Civil	Composite Utilities	4.2.4	Composite Plans of New and Modified Utilities Sta. 958+00 to Sta. 969+00	Design	
1	1	Civil	Composite Utilities	4.2.4	Composite Plans of New and Modified Utilities Sta. 969+00 to Sta. 980+00	Design	
1	1	Civil	Composite Utilities	4.2.4	Composite Plans of New and Modified Utilities Sta. 980+00 to Sta. 991+00	Design	
1	1	Civil	Composite Utilities	4.2.4	Composite Plans of New and Modified Utilities Sta. 991+00 to Sta. 1002+00	Design	
1	1	Civil	Composite Utilities	4.2.4	Composite Plans of New and Modified Utilities Sta. 1002+00 to Sta. 1013+00	Design	
1	1	Civil	Composite Utilities	4.2.4	Composite Plans of New and Modified Utilities Sta. 1013+00 to Sta. 1024+00	Design	
1	1	Civil	Composite Utilities	4.2.4	Composite Plans of New and Modified Utilities Sta. 1024+00 to Sta. 1035+00	Design	
1	1	Civil	Composite Utilities	4.2.4	Composite Plans of New and Modified Utilities Sta. 1035+00 to Sta. 1046+00	Design	
1	1	Civil	Composite Utilities	4.2.4	Composite Plans of New and Modified Utilities Sta. 1046+00 to Sta. 1057+00	Design	
1	1	Civil	Composite Utilities	4.2.4	Composite Plans of New and Modified Utilities Sta. 1057+00 to Sta.1068+00	Design	
1	1	Civil	Composite Utilities	4.2.4	Composite Plans of New and Modified Utilities Sta. 1068+00 to Sta. 1079+00	Design	
1	1	Civil	Composite Utilities	4.2.4	Composite Plans of New and Modified Utilities Sta. 1079+00 to Sta. 1090+00	Design	
1	1	Civil	Composite Utilities	4.2.4	Composite Plans of New and Modified Utilities Sta. 1090+00 to Sta.1101+00	Design	
1	1	Civil	Composite Utilities	4.2.4	Composite Plans of New and Modified Utilities Sta. 1101+00 to Sta. 1112+00	Design	
1	1	Civil	Composite Utilities	4.2.4	Composite Plans of New and Modified Utilities Sta. 1112+00 to Sta. 1123+00	Design	
1	1	Civil	Composite Utilities	4.2.4	Composite Plans of New and Modified Utilities Sta. 1123+00 to Sta. 1134+00	Design	
1	1	Civil	Composite Utilities	4.2.4	Composite Plans of New and Modified Utilities Sta. 1134+00 to Sta. 1145+00	Design	
1	1	Civil	Composite Utilities	4.2.4	Composite Plans of New and Modified Utilities Sta. 1145+00 to Sta. 1156-+00	Design	
1	1	Civil	Composite Utilities	4.2.4	Composite Plans of New and Modified Utilities Sta.1156+00 to Sta. 1167+00	Design	
1	1	Civil	Composite Utilities	4.2.4	Composite Plans of New and Modified Utilities Sta. 1167+00 to Sta. 1178-+00	Design	
1	1	Civil	Composite Utilities	4.2.4	Composite Plans of New and Modified Utilities Sta. 1178+00 to Sta. 1189+00	Design	
1	1	Civil	Composite Utilities	4.2.4	Composite Plans of New and Modified Utilities Sta. 1189+00 to Sta.1200+00	Design	
1	1	Civil	Composite Utilities	4.2.4	Composite Plans of New and Modified Utilities Sta. 1200+00 to Sta. 1211+00	Design	
1	1	Civil	Composite Utilities	4.2.4	Composite Plans of New and Modified Utilities Sta. 1211+00 to Sta. 1222+00	Design	
1	1	Civil	Composite Utilities	4.2.4	Composite Plans of New and Modified Utilities Sta. 1222-+00 to Sta. 1233-+00	Design	
1	1	Civil	Composite Utilities	4.2.4	Composite Plans of New and Modified Utilities Sta. 1233+00 to Sta. 1244+00	Design	
1	1	Civil	Composite Utilities	4.2.4	Composite Plans of New and Modified Utilities Sta. 1244+00 to Sta. 1255+00	Design	
1	1	Civil	Composite Utilities	4.2.4	Composite Plans of New and Modified Utilities Sta. 1255+00 to Sta. 1266+00	Design	
1	1	Civil	Composite Utilities	4.2.4	Composite Plans of New and Modified Utilities Sta. 1266+00 to Sta. 1277+00	Design	
1	1	Civil	Composite Utilities	4.2.4	Composite Plans of New and Modified Utilities Sta. 1277+00 to Sta. 1288+00	Design	
1	1	Civil	Composite Utilities	4.2.4	Composite Plans of New and Modified Utilities Sta. 1288+00 to Sta. 1299-+00	Design	
1	1	Civil	Composite Utilities	4.2.4	Composite Plans of New and Modified Utilities Sta. 1299+00 to Sta. 1310+00	Design	
1	1	Civil	Composite Utilities	4.2.4	Composite Plans of New and Modified Utilities Sta. 1310+00 to Sta. 1321+00	Design	
1	1	Civil	Composite Utilities	4.2.4	Composite Plans of New and Modified Utilities Sta. 1321+00 to Sta. 1332+00	Design	
1	1	Civil	Composite Utilities	4.2.4	Relocated Utilities Details Profiles and Tables 1	Design	
1	1	Civil	Composite Utilities	4.2.4	Relocated Utilities Details Profiles and Tables 2	Design	
1	1	Civil	Composite Utilities	4.2.4	Relocated Utilities Details Profiles and Tables 3	Design	
1	1	Civil	Composite Utilities	4.2.4	Relocated Utilities Details Profiles and Tables 4	Design	
1	1	Civil	Composite Utilities	4.2.4	Relocated Utilities Details Profiles and Tables 5	Design	
1	1	Civil	Composite Utilities	4.2.4	Relocated Utilities Details Profiles and Tables 6	Design	
1	1	Civil	Composite Utilities	4.2.4	Relocated Utilities Details Profiles and Tables 7	Design	
1	1	Civil	Composite Utilities	4.2.4	Relocated Utilities Details Profiles and Tables 15	Design	
1	1	Civil	Composite Utilities	4.2.4	Proposed Utilities Profiles and Tables 1 of 10	Design	
1	1	Civil	Composite Utilities	4.2.4	Proposed Utilities Profiles and Tables 2 of 10	Design	
1	1	Civil	Composite Utilities	4.2.4	Proposed Utilities Profiles and Tables 3 of 10	Design	
1	1	Civil	Composite Utilities	4.2.4	Proposed Utilities Profiles and Tables 4 of 10	Design	
1	1	Civil	Composite Utilities	4.2.4	Proposed Utilities Profiles and Tables 5 of 10	Design	
1	1	Civil	Composite Utilities	4.2.4	Proposed Utilities Profiles and Tables 6 of 10	Design	
1	1	Civil	Composite Utilities	4.2.4	Proposed Utilities Profiles and Tables 7 of 10	Design	
1	1	Civil	Composite Utilities	4.2.4	Proposed Utilities Profiles and Tables 8 of 10	Design	
1	1	Civil	Composite Utilities	4.2.4	Proposed Utilities Profiles and Tables 9 of 10	Design	
1	1	Civil	Composite Utilities	4.2.4	Proposed Utilities Profiles and Tables 10 of 10	Design	

LVL 1	LVL 2	Discipline	Dwg Group		Drawing Description	Drawing Type	Drawing Count by Group
WBS				SOW Para	DESCRIPTION		
						Design, Diag. or Standard	SOW No.
					CIVIL		
1	1	Civil	Composite Utilities	4.2.4	Enlarged Plans and Details of utilities relocation Sht.1 of 8	Design	
1	1	Civil	Composite Utilities	4.2.4	Enlarged Plans and Details of utilities relocation Sht.2 of 8	Design	
1	1	Civil	Composite Utilities	4.2.4	Enlarged Plans and Details of utilities relocation Sht.3 of 8	Design	
1	1	Civil	Composite Utilities	4.2.4	Enlarged Plans and Details of utilities relocation Sht.4 of 8	Design	
1	1	Civil	Composite Utilities	4.2.4	Enlarged Plans and Details of utilities relocation Sht.5 of 8	Design	
1	1	Civil	Composite Utilities	4.2.4	Enlarged Plans and Details of utilities relocation Sht.6 of 8	Design	
1	1	Civil	Composite Utilities	4.2.4	Enlarged Plans and Details of utilities relocation Sht.7 of 8	Design	
1	1	Civil	Composite Utilities	4.2.4	Enlarged Plans and Details of utilities relocation Sht.8 of 8	Design	
1	1	Civil	Composite Utilities	4.2.4	Enlarged Plans and Details of Proposed Utilities Sht.1of 8	Design	
1	1	Civil	Composite Utilities	4.2.4	Enlarged Plans and Details of Proposed Utilities Sht.2of 8	Design	
1	1	Civil	Composite Utilities	4.2.4	Enlarged Plans and Details of Proposed Utilities Sht.3of 8	Design	
1	1	Civil	Composite Utilities	4.2.4	Enlarged Plans and Details of Proposed Utilities Sht.4of 8	Design	
1	1	Civil	Composite Utilities	4.2.4	Enlarged Plans and Details of Proposed Utilities Sht.5of 8	Design	
1	1	Civil	Composite Utilities	4.2.4	Enlarged Plans and Details of Proposed Utilities Sht.6 of 8	Design	
1	1	Civil	Composite Utilities	4.2.4	Enlarged Plans and Details of Proposed Utilities Sht.7of 8	Design	
1	1	Civil	Composite Utilities	4.2.4	Enlarged Plans and Details of Proposed Utilities Sht. 8of 8	Design	
1	1	Civil	Utilities	4.2.4	Index of Utilities Drawings	Design	14
1	1	Civil	Utilities	4.2.4	Standard Utilities Identification Dwg.	Design	
1	1	Civil	Utilities	4.2.4	Standard Utilities Markers Dwg	Design	
1	1	Civil	Utilities	4.2.4	Standard Utilities Abreviations and Notes	Design	
1	1	Civil	Utilities	4.2.4	Standard Water Details	Design	
1	1	Civil	Utilities	4.2.4	Standard Water Details	Design	
1	1	Civil	Utilities	4.2.4	Standard Water Details	Design	
1	1	Civil	Utilities	4.2.4	Standard Sanitary Details	Design	
1	1	Civil	Utilities	4.2.4	Standard Sanitary Details	Design	
1	1	Civil	Utilities	4.2.4	Standard Sanitary Details	Design	
1	1	Civil	Utilities	4.2.4	Standard Catholic Protection Details	Design	
1	1	Civil	Utilities	4.2.4	Standard Thrust Blocks Details	Design	
1	1	Civil	Utilities	4.2.4	Misch. Standard Details	Design	
1	1	Civil	Utilities	4.2.4	Misch. Standard Details	Design	
1	2	Civil	Composite Utilities	4.2.4	Composite Plans of New and Modified Utilities West Falls Church Yard	Design	114
1	2	Civil	Composite Utilities	4.2.4	West Falls Church Yard Utilities Plan	Design	
1	2	Civil	Composite Utilities	4.2.4	West Falls Church Yard Sanitary Plan and Profile	Design	
1	2	Civil	Composite Utilities	4.2.4	West Falls Church Yard Details Prop. Utilities	Design	
1	2	Civil	Composite Utilities	4.2.4	West Falls Church Yard Profile Duct Banks	Design	
1	3	Civil	Composite Utilities	4.2.4	Composite Plans of New and Modified Utilities at Tysons East Station	Design	
1	3	Civil	Composite Utilities	4.2.4	Composite Plans of New and Modified Utilities at Tysons Central "D" Station	Design	
1	3	Civil	Composite Utilities	4.2.4	Composite Plans of New and Modified Utilities at Tysons Central "C" Station	Design	
1	3	Civil	Composite Utilities	4.2.4	Composite Plans of New and Modified Utilities at Tysons West Station	Design	
1	3	Civil	Composite Utilities	4.2.4	Composite Plans of New and Modified Utilities at Wiehle Avenue Station	Design	
1	3	Civil	Composite Utilities	4.2.4	Composite Plans of New and Modified Utilities at Tysons East Station	Design	
1	3	Civil	Composite Utilities	4.2.4	Water and Sewer Plan at Tysons East Station	Design	
1	3	Civil	Composite Utilities	4.2.4	Water and Sewer Profile and Tables at Tysons Central "D" Station	Design	
1	3	Civil	Composite Utilities	4.2.4	Water and Sewer Plan at Tysons Central "C" Station	Design	
1	3	Civil	Composite Utilities	4.2.4	Water and Sewer Plan at Tysons Central "C" Station	Design	
1	3	Civil	Composite Utilities	4.2.4	Water and Sewer Profile and Tables at Tysons Central "C" Station	Design	
1	3	Civil	Composite Utilities	4.2.4	Water and Sewer Plan at Tysons West Station	Design	
1	3	Civil	Composite Utilities	4.2.4	Water and Sewer Plan at Tysons West Station	Design	
1	3	Civil	Composite Utilities	4.2.4	Water and Sewer Profile and Tables at Tysons West Station	Design	
1	3	Civil	Composite Utilities	4.2.4	Water and Sewer Plan at Wiehle Avenue Station	Design	
1	3	Civil	Composite Utilities	4.2.4	Water and Sewer Profile and Tables at Wiehle Avenue Station	Design	
2	1	Civil	Composite Utilities	4.2.4	Composite Plan of Utilities Sta.1332+00 to Sta. 1343+00	Design	
2	1	Civil	Composite Utilities	4.2.4	Composite Plan of Utilities Sta.1343+00 to Sta. 1354+00	Design	
2	1	Civil	Composite Utilities	4.2.4	Composite Plan of Utilities Sta. 1354+00 to Sta. 1365+00	Design	
2	1	Civil	Composite Utilities	4.2.4	Composite Plan of Utilities Sta.1365+00 to Sta. 1376-+00	Design	
2	1	Civil	Composite Utilities	4.2.4	Composite Plan of Utilities Sta. 1376+00 to Sta.1387+00	Design	
2	1	Civil	Composite Utilities	4.2.4	Composite Plan of Utilities Sta.1387+00 to Sta. 1398+00	Design	
2	1	Civil	Composite Utilities	4.2.4	Composite Plan of Utilities Sta. 1398+00 to Sta. 1409+00	Design	
2	1	Civil	Composite Utilities	4.2.4	Composite Plan of Utilities Sta. 1409-+00 to Sta. 1420+00	Design	
2	1	Civil	Composite Utilities	4.2.4	Composite Plan of Utilities Sta. 1420+00 to Sta. 1431+00	Design	
2	1	Civil	Composite Utilities	4.2.4	Composite Plan of Utilities Sta. 1431+00 to Sta. 1442+00	Design	
2	1	Civil	Composite Utilities	4.2.4	Composite Plan of Utilities Sta. 1442+00 to Sta. 1453+00	Design	
2	1	Civil	Composite Utilities	4.2.4	Composite Plan of Utilities Sta. 1453+00 to Sta. 1464+00	Design	
2	1	Civil	Composite Utilities	4.2.4	Composite Plan of Utilities Sta.1464+00 to Sta. 1475+00	Design	
2	1	Civil	Composite Utilities	4.2.4	Composite Plan of Utilities Sta. 1475+00 to Sta. 1486+00	Design	
2	1	Civil	Composite Utilities	4.2.4	Composite Plan of Utilities Sta. 1486+00 to Sta.1497+00	Design	
2	1	Civil	Composite Utilities	4.2.4	Composite Plan of Utilities Sta.1497+00 to Sta. 1508+00	Design	
2	1	Civil	Composite Utilities	4.2.4	Composite Plan of Utilities Sta.1508+00 to Sta.1519+00	Design	
2	1	Civil	Composite Utilities	4.2.4	Composite Plan of Utilities Sta. 1519+00 to Sta. 1530+00	Design	
2	1	Civil	Composite Utilities	4.2.4	Composite Plan of Utilities Sta. 1530+00 to Sta. 1541+00	Design	
2	1	Civil	Composite Utilities	4.2.4	Composite Plan of Utilities Sta. 1541+00 to Sta. 1552+00	Design	
2	1	Civil	Composite Utilities	4.2.4	Composite Plan of Utilities Sta. 1552+00 to Sta. 1563+00	Design	
2	1	Civil	Composite Utilities	4.2.4	Composite Plan of Utilities Sta. 1563+00 to Sta. 1574+00	Design	
2	1	Civil	Composite Utilities	4.2.4	Composite Plan of Utilities Sta. 1574+00 to Sta. 1585+00	Design	
2	1	Civil	Composite Utilities	4.2.4	Composite Plan of Utilities Sta. 1585+00 to Sta. 1596+00	Design	

LVL 1	LVL 2	Discipline	Dwg Group		Drawing Description	Drawing Type	Drawing Count by Group
WBS				SOW Para	DESCRIPTION		
						Design, Diag. or Standard	SOW No.
					CIVIL		
2	1	Civil	Composite Utilities	4.2.4	Composite Plan of Utilities Sta. 1596+00 to Sta. 1607+00	Design	
2	1	Civil	Composite Utilities	4.2.4	Composite Plan of Utilities Sta. 1607+00 to Sta. 1618+00	Design	
2	1	Civil	Composite Utilities	4.2.4	Composite Plan of Utilities Sta. 1618+00 to Sta. 1629+00	Design	
2	1	Civil	Composite Utilities	4.2.4	Composite Plan of Utilities Sta. 1629+00 to Sta. 1640+00	Design	
2	1	Civil	Composite Utilities	4.2.4	Composite Plan of Utilities Sta. 1640+00 to Sta. 1651+00	Design	
2	1	Civil	Composite Utilities	4.2.4	Composite Plan of Utilities Sta. 1651+00 to Sta.1662+00	Design	
2	1	Civil	Composite Utilities	4.2.4	Composite Plan of Utilities Sta. 1662+00 to Sta. 1673+00	Design	
2	1	Civil	Composite Utilities	4.2.4	Composite Plan of Utilities Sta. 1673+00 to Sta. 1684+00	Design	
2	1	Civil	Composite Utilities	4.2.4	Composite Plan of Utilities Sta. 1684+00 to Sta.1695+00	Design	
2	1	Civil	Composite Utilities	4.2.4	Composite Plan of Utilities Sta.1695+00 to Sta. 1706+00	Design	
2	1	Civil	Composite Utilities	4.2.4	Composite Plan of Utilities Sta. 1706+00 to Sta. 1717+00	Design	
2	1	Civil	Composite Utilities	4.2.4	Composite Plan of Utilities Sta. 1717+00 to Sta. 1728+00	Design	
2	1	Civil	Composite Utilities	4.2.4	Composite Plan of Utilities Sta. 1728+00 to Sta. 1739+00	Design	
2	1	Civil	Composite Utilities	4.2.4	Composite Plan of Utilities Sta. 1739+00 to Sta. 1750+00	Design	
2	1	Civil	Composite Utilities	4.2.4	Composite Plan of Utilities Sta.1750+00 to Sta. 1761+00	Design	
2	1	Civil	Composite Utilities	4.2.4	Composite Plan of Utilities Sta. 1761+00 to Sta. 1772+00	Design	
2	1	Civil	Composite Utilities	4.2.4	Composite Plan of Utilities Sta. 1772+00 to Sta. 1783+00	Design	
2	1	Civil	Composite Utilities	4.2.4	Composite Plan of Utilities Sta. 1783+00 to Sta.1794+00	Design	
2	1	Civil	Composite Utilities	4.2.4	Composite Plan of Utilities Sta. 1794+00 to Sta. 1805+00	Design	
2	1	Civil	Composite Utilities	4.2.4	Composite Plan of Utilities Sta. 1805+00 to Sta. 1816+00	Design	
2	1	Civil	Composite Utilities	4.2.4	Composite Plan of Utilities Sta. 1816+00 to Sta. 1827+00	Design	
2	1	Civil	Composite Utilities	4.2.4	Composite Plan of Utilities Sta. 1827+00 to Sta. 1838+00	Design	
2	1	Civil	Composite Utilities	4.2.4	Composite Plan of Utilities Sta. 1838+00 to Sta. 1849+00	Design	
2	1	Civil	Composite Utilities	4.2.4	Composite Plan of Utilities Sta. 1849+00 to Sta. 1860+00	Design	
2	1	Civil	Composite Utilities	4.2.4	Composite Plan of Utilities Sta. 1860+00 to Sta. 1871+00	Design	
2	1	Civil	Composite Utilities	4.2.4	Composite Plan of Utilities Sta. 1871+00 to Sta. 1882+00	Design	
2	1	Civil	Composite Utilities	4.2.4	Composite Plan of Utilities Sta. 1882+00 to Sta. 1893+00	Design	
2	1	Civil	Composite Utilities	4.2.4	Composite Plan of Utilities Sta. 1893+00 to Sta. 1904+00	Design	
2	1	Civil	Composite Utilities	4.2.4	Composite Plan of Utilities Sta. 1904+00 to Sta. 1915+00	Design	
2	1	Civil	Composite Utilities	4.2.4	Composite Plan of Utilities Sta. 1915+00 to Sta. 1926+00	Design	
2	1	Civil	Composite Utilities	4.2.4	Composite Plan of Utilities Sta. 1926+00 to Sta. 1937+00	Design	
2	1	Civil	Composite Utilities	4.2.4	Composite Plan of Utilities Sta. 1937+00 to Sta. 1947+09.36	Design	
2	1	Civil	Composite Utilities	4.2.4	Utilities Profiles, Tables and Details Sht. 1	Design	
2	1	Civil	Composite Utilities	4.2.4	Utilities Profiles, Tables and Details Sht. 2	Design	
2	1	Civil	Composite Utilities	4.2.4	Utilities Profiles, Tables and Details Sht. 3	Design	
2	1	Civil	Composite Utilities	4.2.4	Utilities Profiles, Tables and Details Sht. 4	Design	
2	1	Civil	Composite Utilities	4.2.4	Utilities Profiles, Tables and Details Sht. 5	Design	
2	1	Civil	Composite Utilities	4.2.4	Proposed Utilities Profiles and Tables 1	Design	
2	1	Civil	Composite Utilities	4.2.4	Proposed Utilities Profiles and Tables 2	Design	
2	1	Civil	Composite Utilities	4.2.4	Proposed Utilities Profiles and Tables 3	Design	
2	1	Civil	Composite Utilities	4.2.4	Proposed Utilities Profiles and Tables 4	Design	
2	1	Civil	Composite Utilities	4.2.4	Proposed Utilities Profiles and Tables 5	Design	
2	1	Civil	Composite Utilities	4.2.4	Enlarged Plans and Details of utilities relocation Sht. 1	Design	
2	1	Civil	Composite Utilities	4.2.4	Enlarged Plans and Details of utilities relocation Sht. 2	Design	
2	1	Civil	Composite Utilities	4.2.4	Enlarged Plans and Details of utilities relocation Sht. 3	Design	
2	1	Civil	Composite Utilities	4.2.4	Enlarged Plans and Details of utilities relocation Sht. 4	Design	
2	1	Civil	Composite Utilities	4.2.4	Enlarged Plans and Details of utilities relocation Sht. 5	Design	
2	2	Civil	Composite Utilities	4.2.4	Composite Plan of Utilities Connect. to Yard 15 Connection Sta. 15716+00 to Sta. 15727+00	Design	
2	2	Civil	Composite Utilities	4.2.4	Composite Plan of Utilities Connect. to Yard 15 Connection Sta. 15727+00 to Sta. 15738+00	Design	
2	2	Civil	Composite Utilities	4.2.4	Composite Plan of Utilities Connect. to Yard 15 Connection Sta. 15738+00 to Sta. 15749+00	Design	
2	2	Civil	Composite Utilities	4.2.4	Composite Plan of Utilities Connect. to Yard 15 Connection Sta. 15749+00 to Sta. 15760+00	Design	
2	2	Civil	Composite Utilities	4.2.4	Composite Plan of Utilities Connect. to Yard 15 Connection Sta. 15760+00 to Sta. 15771+00	Design	
2	2	Civil	Composite Utilities	4.2.4	Composite Plan of Utilities Connect. to Yard 15 Connection Sta. 1577+00.00 to Sta. 1580+04.13 - East Lead	Design	
2	2	Civil	Composite Utilities	4.2.4	Composite Plan of Utilities Rail Yard and Shop Sht. 1 of 3	Design	
2	2	Civil	Composite Utilities	4.2.4	Composite Plan of Utilities Rail Yard and Shop Sht. 2 of 3	Design	
2	2	Civil	Composite Utilities	4.2.4	Composite Plan of Utilities Rail Yard and Shop Sht. 3 of 3	Design	
2	3	Civil	Composite Utilities	4.2.4	Composite Plan of Utilities Reston Parkway Station North Plaza	Design	
2	3	Civil	Composite Utilities	4.2.4	Composite Plan of Utilities Reston Parkway Station South Plaza	Design	
2	3	Civil	Composite Utilities	4.2.4	Composite Plan of Utilities Herndon Monror Station North Plaza	Design	
2	3	Civil	Composite Utilities	4.2.4	Composite Plan of Utilities Herndon Monror Station South Plaza	Design	
2	3	Civil	Composite Utilities	4.2.4	Composite Plan of Utilities Route 28 Station North Plaza	Design	
2	3	Civil	Composite Utilities	4.2.4	Composite Plan of Utilities Route 28 Station South Plaza	Design	
2	3	Civil	Composite Utilities	4.2.4	Composite Plan of Utilities Route 606 Station Sht 1 of 2	Design	
2	3	Civil	Composite Utilities	4.2.4	Composite Plan of Utilities Route 606 Station Sht 2 of 2	Design	
2	3	Civil	Composite Utilities	4.2.4	Composite Plan of Utilities Dulles Airport Sht 1 of 2	Design	
2	3	Civil	Composite Utilities	4.2.4	Composite Plan of Utilities Dulles Airport Sht 2 of 3	Design	
2	3	Civil	Composite Utilities	4.2.4	Composite Plan of Utilities Dulles Airport Sht 3 of 3	Design	
2	3	Civil	Composite Utilities	4.2.4	Composite Plan of Utilities Route 772 Station Sht 1 of 2	Design	
2	3	Civil	Composite Utilities	4.2.4	Composite Plan of Utilities Route 772 Station Sht 2 of 2	Design	

LVL 1	LVL 2	Discipline	Dwg Group		Drawing Description	Drawing Type	Drawing Count by Group
WBS				SOW Para	DESCRIPTION		
						Design, Diag. or Standard	SOW No.
					CIVIL		
				4.2.4 Total			218
1	1	Civil	Grading & Drainage Drawings	4.2.5	Grading and Drainage Plan, Sta. 556+00 to Sta. 566+00	Design	166
1	1	Civil	Grading & Drainage Drawings	4.2.5	Grading and Drainage Plan, Sta.727+00 to Sta. 738+00	Design	
1	1	Civil	Grading & Drainage Drawings	4.2.5	Grading and Drainage Plan, Sta.738+00 to Sta. 749+00	Design	
1	1	Civil	Grading & Drainage Drawings	4.2.5	Grading and Drainage Plan, Sta.749+00 to Sta. 760+00	Design	
1	1	Civil	Grading & Drainage Drawings	4.2.5	Grading and Drainage Plan, Sta.7608+00 to Sta. 771+00	Design	
1	1	Civil	Grading & Drainage Drawings	4.2.5	Grading and Drainage Plan, Sta.771+00 to Sta. 782+00	Design	
1	1	Civil	Grading & Drainage Drawings	4.2.5	Grading and Drainage Plan, Sta. 782+00 to Sta .793+00	Design	
1	1	Civil	Grading & Drainage Drawings	4.2.5	Grading and Drainage Plan, Sta. 793+00 to Sta. 804+00	Design	
1	1	Civil	Grading & Drainage Drawings	4.2.5	Grading and Drainage Plan, Sta. 804+00 to Sta. 815+00	Design	
1	1	Civil	Grading & Drainage Drawings	4.2.5	Grading and Drainage Plan, Sta. 815+00 to Sta. 826+00	Design	
1	1	Civil	Grading & Drainage Drawings	4.2.5	Grading and Drainage Plan, Sta. 826+00 to Sta. 837+00	Design	
1	1	Civil	Grading & Drainage Drawings	4.2.5	Grading and Drainage Plan, Sta. 837+00 to Sta. 848+00	Design	
1	1	Civil	Grading & Drainage Drawings	4.2.5	Grading and Drainage Plan, Sta. 848+00 to Sta. 859+00	Design	
1	1	Civil	Grading & Drainage Drawings	4.2.5	Grading and Drainage Plan, Sta. 859+00 to Sta. 870+00	Design	
1	1	Civil	Grading & Drainage Drawings	4.2.5	Grading and Drainage Plan, Sta. 870+00 to Sta. 881+00	Design	
1	1	Civil	Grading & Drainage Drawings	4.2.5	Grading and Drainage Plan, Sta. 881+00 to Sta. 892+00	Design	
1	1	Civil	Grading & Drainage Drawings	4.2.5	Grading and Drainage Plan, Sta. 892+00 to Sta. 903+00	Design	
1	1	Civil	Grading & Drainage Drawings	4.2.5	Grading and Drainage Plan, Sta. 903+00 to Sta. 914+00	Design	
1	1	Civil	Grading & Drainage Drawings	4.2.5	Grading and Drainage Plan, Sta. 914+00 to Sta. 925+00	Design	
1	1	Civil	Grading & Drainage Drawings	4.2.5	Grading and Drainage Plan, Sta. 925+00 to Sta. 936+00	Design	
1	1	Civil	Grading & Drainage Drawings	4.2.5	Grading and Drainage Plan, Sta. 936+00 to Sta. 947+00	Design	
1	1	Civil	Grading & Drainage Drawings	4.2.5	Grading and Drainage Plan, Sta. 947+00 to Sta. 958+00	Design	
1	1	Civil	Grading & Drainage Drawings	4.2.5	Grading and Drainage Plan, Sta. 958+00 to Sta. 969+00	Design	
1	1	Civil	Grading & Drainage Drawings	4.2.5	Grading and Drainage Plan, Sta. 969+00 to Sta. 980+00	Design	
1	1	Civil	Grading & Drainage Drawings	4.2.5	Grading and Drainage Plan, Sta. 980+00 to Sta. 991+00	Design	
1	1	Civil	Grading & Drainage Drawings	4.2.5	Grading and Drainage Plan, Sta. 991+00 to Sta.1092+00	Design	
1	1	Civil	Grading & Drainage Drawings	4.2.5	Grading and Drainage Plan, Sta. 1002+00 to Sta. 1013+00	Design	
1	1	Civil	Grading & Drainage Drawings	4.2.5	Grading and Drainage Plan, Sta.1013+00 to Sta. 1024+00	Design	
1	1	Civil	Grading & Drainage Drawings	4.2.5	Grading and Drainage Plan, Sta. 1030+00 to Sta. 1035+00	Design	
1	1	Civil	Grading & Drainage Drawings	4.2.5	Grading and Drainage Plan, Sta. 1035+00 to Sta. 1046+00	Design	
1	1	Civil	Grading & Drainage Drawings	4.2.5	Grading and Drainage Plan, Sta. 1046+00 to Sta. 1057+00	Design	
1	1	Civil	Grading & Drainage Drawings	4.2.5	Grading and Drainage Plan, Sta. 1057+00 to Sta.1068+00	Design	
1	1	Civil	Grading & Drainage Drawings	4.2.5	Grading and Drainage Plan, Sta. 1068+00 to Sta. 1079+00	Design	
1	1	Civil	Grading & Drainage Drawings	4.2.5	Grading and Drainage Plan, Sta. 1079+00 to Sta. 1090+00	Design	
1	1	Civil	Grading & Drainage Drawings	4.2.5	Grading and Drainage Plan, Sta. 1090+00 to Sta.1101+00	Design	
1	1	Civil	Grading & Drainage Drawings	4.2.5	Grading and Drainage Plan, Sta.1101+00 to Sta. 1112+00	Design	
1	1	Civil	Grading & Drainage Drawings	4.2.5	Grading and Drainage Plan, Sta. 1112+00 to Sta. 1123+00	Design	
1	1	Civil	Grading & Drainage Drawings	4.2.5	Grading and Drainage Plan, Sta. 1123+00 to Sta. 1134+00	Design	
1	1	Civil	Grading & Drainage Drawings	4.2.5	Grading and Drainage Plan, Sta. 1134+00 to Sta. 1145+00	Design	
1	1	Civil	Grading & Drainage Drawings	4.2.5	Grading and Drainage Plan, Sta. 1145+00 to Sta. 1156-+00	Design	
1	1	Civil	Grading & Drainage Drawings	4.2.5	Grading and Drainage Plan, Sta.1156+00 to Sta. 1167+00	Design	
1	1	Civil	Grading & Drainage Drawings	4.2.5	Grading and Drainage Plan, Sta. 1167+00 to Sta. 1178+00	Design	
1	1	Civil	Grading & Drainage Drawings	4.2.5	Grading and Drainage Plan, Sta. 1178+00 to Sta. 1189+00	Design	
1	1	Civil	Grading & Drainage Drawings	4.2.5	Grading and Drainage Plan, Sta. 1189+00 to Sta.1200+00	Design	
1	1	Civil	Grading & Drainage Drawings	4.2.5	Grading and Drainage Plan, Sta. 1200+00 to Sta. 1211+00	Design	
1	1	Civil	Grading & Drainage Drawings	4.2.5	Grading and Drainage Plan, Sta. 1211+00 to Sta. 1222+00	Design	
1	1	Civil	Grading & Drainage Drawings	4.2.5	Grading and Drainage Plan, Sta. 1222+00 to Sta. 1233+00	Design	
1	1	Civil	Grading & Drainage Drawings	4.2.5	Grading and Drainage Plan, Sta. 1233-+00 to Sta. 1244+00	Design	
1	1	Civil	Grading & Drainage Drawings	4.2.5	Grading and Drainage Plan, Sta. 1244+00 to Sta. 1255+00	Design	
1	1	Civil	Grading & Drainage Drawings	4.2.5	Grading and Drainage Plan, Sta. 1255+00 to Sta. 1266+00	Design	
1	1	Civil	Grading & Drainage Drawings	4.2.5	Grading and Drainage Plan, Sta. 1266+00 to Sta. 1277+00	Design	
1	1	Civil	Grading & Drainage Drawings	4.2.5	Grading and Drainage Plan, Sta. 1277+00 to Sta. 1288+00	Design	
1	1	Civil	Grading & Drainage Drawings	4.2.5	Grading and Drainage Plan, Sta. 1288+00 to Sta. 1299-+00	Design	
1	1	Civil	Grading & Drainage Drawings	4.2.5	Grading and Drainage Plan, Sta. 1299+00 to Sta. 1310+00	Design	
1	1	Civil	Grading & Drainage Drawings	4.2.5	Grading and Drainage Plan, Sta. 1310+00 to Sta. 1321+00	Design	
1	1	Civil	Grading & Drainage Drawings	4.2.5	Grading and Drainage Plan, Sta. 1321+00 to Sta. 1332+00	Design	
1	1	Civil	Grading & Drainage Drawings	4.2.5	Grading and Drainage Typical Cross Sections - Sht. 1	Design	
1	1	Civil	Grading & Drainage Drawings	4.2.5	Grading and Drainage Typical Cross Sections - Sht. 2	Design	
1	1	Civil	Grading & Drainage Drawings	4.2.5	Grading and Drainage Typical Cross Sections - Sht. 3	Design	
1	1	Civil	Grading & Drainage Drawings	4.2.5	Grading and Drainage Typical Cross Sections - Sht. 4	Design	
1	1	Civil	Grading & Drainage Drawings	4.2.5	Grading and Drainage Typical Cross Sections - Sht. 5	Design	
1	1	Civil	Grading & Drainage Drawings	4.2.5	Storm Drainage Profile, Tables and Details Sht. 1	Design	
1	1	Civil	Grading & Drainage Drawings	4.2.5	Storm Drainage Profile, Tables and Details Sht. 2	Design	
1	1	Civil	Grading & Drainage Drawings	4.2.5	Storm Drainage Profile, Tables and Details Sht. 3	Design	
1	1	Civil	Grading & Drainage Drawings	4.2.5	Storm Drainage Profile, Tables and Details Sht. 4	Design	
1	1	Civil	Grading & Drainage Drawings	4.2.5	Storm Drainage Profile, Tables and Details Sht. 5	Design	
1	1	Civil	Grading & Drainage Drawings	4.2.5	Storm Drainage Profile, Tables and Details Sht. 6	Design	
1	1	Civil	Grading & Drainage Drawings	4.2.5	Storm Drainage Profile, Tables and Details Sht. 7	Design	
1	1	Civil	Grading & Drainage Drawings	4.2.5	Storm Drainage Profile, Tables and Details Sht. 8	Design	
1	1	Civil	Grading & Drainage Drawings	4.2.5	Storm Drainage Profile, Tables and Details Sht. 9	Design	
1	1	Civil	Grading & Drainage Drawings	4.2.5	Storm Drainage Profile, Tables and Details Sht. 10	Design	
1	1	Civil	Grading & Drainage Drawings	4.2.5	Grading and Drainage Details and Basin Sta. 892+00	Design	
1	1	Civil	Grading & Drainage Drawings	4.2.5	Grading and Drainage Details and Basin Sta.1060+00	Design	
1	1	Civil	Grading & Drainage Drawings	4.2.5	Grading and Drainage Details and Basin Sta.1100+00	Design	

LVL 1	LVL 2	Discipline	Dwg Group		Drawing Description	Drawing Type	Drawing Count by Group
WBS				SOW Para	DESCRIPTION		
						Design, Diag. or Standard	SOW No.
					CIVIL		
1	1	Civil	Grading & Drainage Drawings	4.2.5	Grading and Drainage Details and Basin Sta.1116+00	Design	
1	1	Civil	Grading & Drainage Drawings	4.2.5	Grading and Drainage Details and Basin Sta. 1140+00	Design	
1	1	Civil	Grading & Drainage Drawings	4.2.5	Grading and Drainage Details and Basin Sta.1169+00	Design	
1	1	Civil	Grading & Drainage Drawings	4.2.5	Grading and Drainage Details and Basin Sta. 1195+00	Design	
1	1	Civil	Grading & Drainage Drawings	4.2.5	Grading and Drainage Details and Basin Sta.1212+00	Design	
1	1	Civil	Grading & Drainage Drawings	4.2.5	Grading and Drainage Details and Basin Sta. 1232+00	Design	
1	1	Civil	Grading & Drainage Drawings	4.2.5	Grading and Drainage Details and Basin Sta. 1238+00	Design	
1	1	Civil	Grading & Drainage Drawings	4.2.5	Grading and Drainage Details and Basin Sta.1259+00	Design	
1	1	Civil	Grading & Drainage Drawings	4.2.5	Grading and Drainage Details sht. 1	Design	
1	1	Civil	Grading & Drainage Drawings	4.2.5	Grading and Drainage Details sht. 2	Design	
1	1	Civil	Grading & Drainage Drawings	4.2.5	Grading and Drainage Details sht. 3	Design	
1	2	Civil	Grading & Drainage Drawings	4.2.5	Grading and Drainage Plan West Falls Church Yard	Design	
1	2	Civil	Grading & Drainage Drawings	4.2.5	Grading and Drainage Profile and Details West Falls Church Yard	Design	
1	3	Civil	Grading & Drainage Drawings	4.2.5	Grading and Drainage Plan Tysons East Station	Design	
1	3	Civil	Grading & Drainage Drawings	4.2.5	Drainage Profile Tysons East Station	Design	
1	3	Civil	Grading & Drainage Drawings	4.2.5	Grading and Drainage Plan Tysons Central "C" Station	Design	
1	3	Civil	Grading & Drainage Drawings	4.2.5	Drainage Profile Tysons Central "C" Station	Design	
1	3	Civil	Grading & Drainage Drawings	4.2.5	Grading and Drainage Plan Tysons Central "D" Station	Design	
1	3	Civil	Grading & Drainage Drawings	4.2.5	Drainage Profile Tysons Central "D" Station	Design	
1	3	Civil	Grading & Drainage Drawings	4.2.5	Grading and Drainage Plan Tysons West Station, Parking Lot	Design	
1	3	Civil	Grading & Drainage Drawings	4.2.5	Grading and Drainage Plan Tysons West Station, Parking Lot	Design	
1	3	Civil	Grading & Drainage Drawings	4.2.5	Drainage Profile Tysons West Station, Parking Lot	Design	
1	3	Civil	Grading & Drainage Drawings	4.2.5	Drainage Profile Tysons West Station, Parking Lot	Design	
1	3	Civil	Grading & Drainage Drawings	4.2.5	Grading and Drainage Plan at Wiehle Avenue Station, Pavilions & TPSS#11	Design	
1	3	Civil	Grading & Drainage Drawings	4.2.5	Grading and Drainage Plan at Wiehle Avenue Station, Pavilions & TPSS#11	Design	
1	3	Civil	Grading & Drainage Drawings	4.2.5	Drainage Profile at Wiehle Avenue Station, Pavilions & TPSS#11	Design	
2	1	Civil	Grading & Drainage Drawings	4.2.5	Grading and Drainage - Plan along ROW Sht. 1	Design	
2	1	Civil	Grading & Drainage Drawings	4.2.5	Grading and Drainage - Plan along ROW Sht. 2	Design	
2	1	Civil	Grading & Drainage Drawings	4.2.5	Grading and Drainage - Plan along ROW Sht. 3	Design	
2	1	Civil	Grading & Drainage Drawings	4.2.5	Grading and Drainage - Plan along ROW Sht. 4	Design	
2	1	Civil	Grading & Drainage Drawings	4.2.5	Grading and Drainage - Plan along ROW Sht. 5	Design	
2	1	Civil	Grading & Drainage Drawings	4.2.5	Grading and Drainage - Plan along ROW Sht. 6	Design	
2	1	Civil	Grading & Drainage Drawings	4.2.5	Grading and Drainage - Plan along ROW Sht. 7	Design	
2	1	Civil	Grading & Drainage Drawings	4.2.5	Grading and Drainage - Plan along ROW Sht. 8	Design	
2	1	Civil	Grading & Drainage Drawings	4.2.5	Grading and Drainage - Plan along ROW Sht. 9	Design	
2	1	Civil	Grading & Drainage Drawings	4.2.5	Grading and Drainage - Plan along ROW Sht. 10	Design	
2	1	Civil	Grading & Drainage Drawings	4.2.5	Grading and Drainage - Plan along ROW Sht. 11	Design	
2	1	Civil	Grading & Drainage Drawings	4.2.5	Grading and Drainage - Plan along ROW Sht. 12	Design	
2	1	Civil	Grading & Drainage Drawings	4.2.5	Grading and Drainage - Plan along ROW Sht. 13	Design	
2	1	Civil	Grading & Drainage Drawings	4.2.5	Grading and Drainage - Plan along ROW Sht. 14	Design	
2	1	Civil	Grading & Drainage Drawings	4.2.5	Grading and Drainage - Plan along ROW Sht. 15	Design	
2	1	Civil	Grading & Drainage Drawings	4.2.5	Grading and Drainage - Plan along ROW Sht. 16	Design	
2	1	Civil	Grading & Drainage Drawings	4.2.5	Grading and Drainage - Plan along ROW Sht. 17	Design	
2	1	Civil	Grading & Drainage Drawings	4.2.5	Grading and Drainage - Plan along ROW Sht. 18	Design	
2	1	Civil	Grading & Drainage Drawings	4.2.5	Grading and Drainage - Plan along ROW Sht. 19	Design	
2	1	Civil	Grading & Drainage Drawings	4.2.5	Grading and Drainage - Plan along ROW Sht. 20	Design	
2	1	Civil	Grading & Drainage Drawings	4.2.5	Grading and Drainage - Plan along ROW Sht. 21	Design	
2	1	Civil	Grading & Drainage Drawings	4.2.5	Grading and Drainage - Plan along ROW Sht. 22	Design	
2	1	Civil	Grading & Drainage Drawings	4.2.5	Grading and Drainage - Plan along ROW Sht. 23	Design	
2	1	Civil	Grading & Drainage Drawings	4.2.5	Grading and Drainage - Plan along ROW Sht. 24	Design	
2	1	Civil	Grading & Drainage Drawings	4.2.5	Grading and Drainage - Plan along ROW Sht. 25	Design	
2	1	Civil	Grading & Drainage Drawings	4.2.5	Grading and Drainage - Plan along ROW Sht. 26	Design	
2	1	Civil	Grading & Drainage Drawings	4.2.5	Grading and Drainage - Plan along ROW Sht. 27	Design	
2	1	Civil	Grading & Drainage Drawings	4.2.5	Grading and Drainage - Plan along ROW Sht. 28	Design	
2	1	Civil	Grading & Drainage Drawings	4.2.5	Grading & Drainage Plan Connect. to Yard 15 Connection Sta. 15716+00 to Sta. 15727+00	Design	
2	1	Civil	Grading & Drainage Drawings	4.2.5	Grading & Drainage Plan Connect. to Yard 15 Connection Sta. 15738+00 to Sta. 15749+00	Design	
2	1	Civil	Grading & Drainage Drawings	4.2.5	Grading & Drainage Plan Connect. to Yard 15 Connection Sta. 15760+00 to Sta. 15771+00	Design	
2	1	Civil	Grading & Drainage Drawings	4.2.5	Grading & Drainage Plan Connect. to Yard 15 Connection Sta. 1577+00.00 to Sta. 1580+04.13 - East Lead	Design	
2	1	Civil	Grading & Drainage Drawings	4.2.5	Grading and Drainage Typical Cross Sections - Sht. 1	Design	
2	1	Civil	Grading & Drainage Drawings	4.2.5	Grading and Drainage Typical Cross Sections - Sht. 2	Design	
2	1	Civil	Grading & Drainage Drawings	4.2.5	Grading and Drainage Typical Cross Sections - Sht. 3	Design	
2	1	Civil	Grading & Drainage Drawings	4.2.5	Grading and Drainage Typical Cross Sections - Sht. 4	Design	
2	1	Civil	Grading & Drainage Drawings	4.2.5	Storm Drainage Profile, Tables and Details Sht. 1	Design	
2	1	Civil	Grading & Drainage Drawings	4.2.5	Storm Drainage Profile, Tables and Details Sht. 2	Design	
2	1	Civil	Grading & Drainage Drawings	4.2.5	Storm Drainage Profile, Tables and Details Sht. 3	Design	
2	1	Civil	Grading & Drainage Drawings	4.2.5	Storm Drainage Profile, Tables and Details Sht. 4	Design	
2	1	Civil	Grading & Drainage Drawings	4.2.5	Storm Drainage Profile, Tables and Details Sht. 5	Design	
2	1	Civil	Grading & Drainage Drawings	4.2.5	Storm Drainage Profile, Tables and Details Sht. 6	Design	
2	1	Civil	Grading & Drainage Drawings	4.2.5	Storm Drainage Profile, Tables and Details Sht. 7	Design	
2	1	Civil	Grading & Drainage Drawings	4.2.5	Storm Drainage Profile, Tables and Details Sht. 8	Design	
2	1	Civil	Grading & Drainage Drawings	4.2.5	Storm Drainage Profile, Tables and Details Sht. 9	Design	

LVL 1	LVL 2	Discipline	Dwg Group		Drawing Description	Drawing Type	Drawing Count by Group
WBS				SOW Para	DESCRIPTION		
						Design, Diag. or Standard	SOW No.
					CIVIL		
2	1	Civil	Grading & Drainage Drawings	4.2.5	Grading and Drainage Details and Basin Sta.1374+00	Design	
2	1	Civil	Grading & Drainage Drawings	4.2.5	Grading and Drainage Details and Basin Sta.1380+50	Design	
2	1	Civil	Grading & Drainage Drawings	4.2.5	Grading and Drainage Details and Basin Sta.1403+00	Design	
2	1	Civil	Grading & Drainage Drawings	4.2.5	Grading and Drainage Details and Basin Sta.1437+00	Design	
2	1	Civil	Grading & Drainage Drawings	4.2.5	Grading and Drainage Details and Basin Sta.1486+00	Design	
2	1	Civil	Grading & Drainage Drawings	4.2.5	Grading and Drainage Details and Basin Sta. 1509+50	Design	
2	1	Civil	Grading & Drainage Drawings	4.2.5	Grading and Drainage Details and Basin Sta. 1810+50	Design	
2	1	Civil	Grading & Drainage Drawings	4.2.5	Grading and Drainage Details and Basin Sta. 1860+00	Design	
2	1	Civil	Grading & Drainage Drawings	4.2.5	Grading and Drainage Details and Basin Sta. 1947+00	Design	
2	2	Civil	Grading & Drainage Drawings	4.2.5	Grading and Drainage Plan Rail Yard and Shop Sht. 1	Design	
2	2	Civil	Grading & Drainage Drawings	4.2.5	Grading and Drainage Plan Rail Yard and Shop Sht. 2	Design	
2	3	Civil	Grading & Drainage Drawings	4.2.5	Grading and Drainage Plan Reston Parkway Station South Plaza	Design	
2	3	Civil	Grading & Drainage Drawings	4.2.5	Grading and Drainage Plan Herndon Monroe Station Sht. 1	Design	
2	3	Civil	Grading & Drainage Drawings	4.2.5	Grading and Drainage Plan Herndon Monroe Station Sht. 2	Design	
2	3	Civil	Grading & Drainage Drawings	4.2.5	Grading and Drainage Plan Route 28 Station North Plaza	Design	
2	3	Civil	Grading & Drainage Drawings	4.2.5	Grading and Drainage Plan Route 606 Station Sht 1	Design	
2	3	Civil	Grading & Drainage Drawings	4.2.5	Grading and Drainage Plan Route 606 Station Sht 2	Design	
2	3	Civil	Grading & Drainage Drawings	4.2.5	Grading and Drainage Plan Route 772 Station Sht 1	Design	
2	3	Civil	Road Drawings	4.2.5	Route 772Station Road Drainage Profile and Details Sht 1 of 3	Design	
2	3	Civil	Road Drawings	4.2.5	Route 772 Station Road Drainage Profile and Details Sht 2 of 3	Design	
2	3	Civil	Road Drawings	4.2.5	Route 772 Station Road Drainage Profile and Details Sht 3 of 3	Design	
				4.2.5 Total			166
1	1	Civil	Road Drawings	4.2.6	Typical Road Details	Design	108
1	1	Civil	Road Drawings	4.2.6	Access Road to TBS\RTC 3	Design	
1	1	Civil	Road Drawings	4.2.6	Access Road to TBS\RTC 4	Design	
1	1	Civil	Road Drawings	4.2.6	Access Road to TPSS#2	Design	
1	1	Civil	Road Drawings	4.2.6	Route 123 Road Changes Intersection w/ Anderson Rd.	Design	
1	1	Civil	Road Drawings	4.2.6	Route 123 Road Changes Intersection w/ Scotts Cross.	Design	
1	1	Civil	Road Drawings	4.2.6	Route 123 Road Changes Intersection w/Old Meadow	Design	
1	1	Civil	Road Drawings	4.2.6	Route 7 with Tysons Road Intersection	Design	
1	1	Civil	Road Drawings	4.2.6	Route 7 with International Blvd. Intersection	Design	
1	1	Civil	Road Drawings	4.2.6	Route 7 with Pinnacle Blvd. Intersection	Design	
1	1	Civil	Road Drawings	4.2.6	Route 7 with Gosnell Road Intersection	Design	
1	1	Civil	Road Drawings	4.2.6	Route 7 with Westpark Road Intersection	Design	
1	1	Civil	Road Drawings	4.2.6	Route 7 with Westwood Road Intersection	Design	
1	1	Civil	Road Drawings	4.2.6	Route 7 with Tyco Road Intersection	Design	
1	1	Civil	Road Drawings	4.2.6	Details for Intersections	Design	
1	1	Civil	Road Drawings	4.2.6	Details for Intersections	Design	
1	1	Civil	Road Drawings	4.2.6	Access Road to Airport EB Plan & Profile Sta 1252+00 to Sta 1263+00	Design	
1	1	Civil	Road Drawings	4.2.6	Access Road to Airport EB Plan & Profile Sta 1263+00 to Sta 1274+00	Design	
1	1	Civil	Road Drawings	4.2.6	Access Road to Airport EB Plan & Profile Sta 1274+00 to Sta 1285+00	Design	
1	1	Civil	Road Drawings	4.2.6	Access Road to Airport EB Plan & Profile Sta 1285+00 to Sta 1296+00	Design	
1	1	Civil	Road Drawings	4.2.6	Access Road to Airport EB Plan & Profile Sta 1296+00 to Sta 1307+00	Design	
1	1	Civil	Road Drawings	4.2.6	Access Road to Airport EB Plan & Profile Sta 1307+00 to Sta 1318+00	Design	
1	1	Civil	Road Drawings	4.2.6	Access Road to Airport EB Plan & Profile Sta 1318+00 to Sta 1321+00	Design	
1	1	Civil	Road Drawings	4.2.6	Access Road to Airport EB Plan & Profile Sta 1321+00 to Sta 1332+00	Design	
1	1	Civil	Road Drawings	4.2.6	Access Road to TPSS#7	Design	
1	1	Civil	Road Drawings	4.2.6	Access Road to TPSS#8/RTC 7	Design	
1	1	Civil	Road Drawings	4.2.6	Access Road to TPSS#9	Design	
1	1	Civil	Road Drawings	4.2.6	Access Road to TPSS# 10/RTC 8	Design	
1	1	Civil	Road Drawings	4.2.6	Access Road to TBS/RTC 9	Design	
1	1	Civil	Road Drawings	4.2.6	Access Road to TPSS # 11	Design	
1	1	Civil	Road Drawings	4.2.6	Access Road to Airport WB Plan & Profile Sta 1238+00 to Sta 1249+00	Design	
1	1	Civil	Road Drawings	4.2.6	Access Road to Airport WB Plan & Profile Sta 1249+00 to Sta 1260+00	Design	
1	1	Civil	Road Drawings	4.2.6	Access Road to Airport WB Plan & Profile Sta 1260+00 to Sta 1271+00	Design	
1	1	Civil	Road Drawings	4.2.6	Access Road to Airport WB Plan & Profile Sta 1271+00 to Sta 1282+00	Design	
1	1	Civil	Road Drawings	4.2.6	Access Road to Airport WB Plan & Profile Sta 1282+00 to Sta 1293+00	Design	
1	1	Civil	Road Drawings	4.2.6	Access Road to Airport WB Plan & Profile Sta 1293+00 to Sta 1304+00	Design	
1	1	Civil	Road Drawings	4.2.6	Access Road to Airport WB Plan & Profile Sta 1304+00 to Sta 1315+00	Design	
1	1	Civil	Road Drawings	4.2.6	Access Road to Airport WB Plan & Profile Sta 1315+00 to Sta 1321+00	Design	
1	1	Civil	Road Drawings	4.2.6	Access Road to Airport WB Plan & Profile Sta 1321+00 to Sta 1332+00	Design	
1	1	Civil	Road Drawings	4.2.6	Access Road to Airport WB and EB Sections and Details Sht 1 of 4	Design	
1	1	Civil	Road Drawings	4.2.6	Access Road to Airport WB and EB Sections and Details Sht 2 of 4	Design	
1	1	Civil	Road Drawings	4.2.6	Access Road to Airport WB and EB Sections and Details Sht 3 of 4	Design	
1	1	Civil	Road Drawings	4.2.6	Access Road to Airport WB and EB Sections and Details Sht 4 of 4	Design	
1	1	Civil	Road Drawings	4.2.6	Site/Construction Plan for Road between Sta. 991+00 and Sta. 1002+00	Design	
1	1	Civil	Road Drawings	4.2.6	Plan and Profile for Road between Sta. 991+00 and Sta. 1002+00	Design	
1	1	Civil	Road Drawings	4.2.6	Sections for Road between Sta. 991+00 and Sta. 1002+00	Design	
1	3	Civil	Road Drawings	4.2.6	Road Construction Plan at Tysons East Station	Design	
1	3	Civil	Road Drawings	4.2.6	Road Cross Sections at Tysons East Station	Design	
1	3	Civil	Road Drawings	4.2.6	Road Construction Plan at Tysons Central "D" Station	Design	
1	3	Civil	Road Drawings	4.2.6	Road Cross Sections at Tysons Central "D" Station	Design	
1	3	Civil	Road Drawings	4.2.6	Road Construction Plan at Tysons West Station	Design	
1	3	Civil	Road Drawings	4.2.6	Road Profile at Tysons West Station Tyco Rd.	Design	
1	3	Civil	Road Drawings	4.2.6	Road Profile at Tysons West Station North side of Parking Garage	Design	

LVL 1	LVL 2	Discipline	Dwg Group		Drawing Description	Drawing Type	Drawing Count by Group
WBS				SOW Para	DESCRIPTION		
						Design, Diag. or Standard	SOW No.
					CIVIL		
1	3	Civil	Road Drawings	4.2.6	Road Profile at Tysons West Station East side of Parking Garage	Design	
1	3	Civil	Road Drawings	4.2.6	Site Plan Wiehle Avenue Station entry areas	Design	
1	3	Civil	Road Drawings	4.2.6	Road Construction Plan Wiehle Avenue Station	Design	
2	1	Civil	Road Drawings	4.2.6	Access Road to Airport WB Plan & Profile Sta 1330+00 to Sta 1340+00	Design	
2	1	Civil	Road Drawings	4.2.6	Access Road to Airport Plan & Profile Sta 1352+00 to Sta 1363+00	Design	
2	1	Civil	Road Drawings	4.2.6	Access Road to Airport Plan & Profile Sta 1363+00 to Sta 1374+00	Design	
2	1	Civil	Road Drawings	4.2.6	Access Road to Airport Plan & Profile Sta 1374+00 to Sta 1385+00	Design	
2	1	Civil	Road Drawings	4.2.6	Access Road to Airport Plan & Profile Sta 1385+00 to Sta 1396+00	Design	
2	1	Civil	Road Drawings	4.2.6	Access Road to Airport Plan & Profile Sta 1396+00 to Sta 1407+00	Design	
2	1	Civil	Road Drawings	4.2.6	Access Road to Airport Plan & Profile Sta 1407+00 to Sta 1418+00	Design	
2	1	Civil	Road Drawings	4.2.6	Access Road to Airport Plan & Profile Sta 1418+00 to Sta 1429+00	Design	
2	1	Civil	Road Drawings	4.2.6	Access Road to Airport Plan & Profile Sta 1429+00 to Sta 1440+00	Design	
2	1	Civil	Road Drawings	4.2.6	Access Road to Airport Plan & Profile Sta 1440+00 to Sta 1451+00	Design	
2	1	Civil	Road Drawings	4.2.6	Access Road to Airport Plan & Profile Sta 1451+00 to Sta 1462+00	Design	
2	1	Civil	Road Drawings	4.2.6	Access Road to Airport Plan & Profile Sta 1462+00 to Sta 1473+00	Design	
2	1	Civil	Road Drawings	4.2.6	Access Road to Airport Plan & Profile Sta 1473+00 to Sta 1484+00	Design	
2	1	Civil	Road Drawings	4.2.6	Access Road to Airport Plan & Profile Sta 1484+00 to Sta 1495+00	Design	
2	1	Civil	Road Drawings	4.2.6	Access Road to Airport Plan & Profile Sta 1495+00 to Sta 1502+00	Design	
2	1	Civil	Road Drawings	4.2.6	Access Road to Airport Plan & Profile Sta 1509+00 to Sta 1520+00	Design	
2	1	Civil	Road Drawings	4.2.6	Access Road to Airport Plan & Profile Sta 1520+00 to Sta 1531+00	Design	
2	1	Civil	Road Drawings	4.2.6	Access Road to Airport Plan & Profile Sta 1531+00 to Sta 1542+00	Design	
2	1	Civil	Road Drawings	4.2.6	Access Road to Airport Plan & Profile Sta 1542+00 to Sta 1553+00	Design	
2	1	Civil	Road Drawings	4.2.6	Access Road to Airport Plan & Profile Sta 1553+00 to Sta 1564+00	Design	
2	1	Civil	Road Drawings	4.2.6	Access Road to Airport Plan & Profile Sta 1564+00 to Sta 1568+00	Design	
2	1	Civil	Road Drawings	4.2.6	Dulles Greenway Plan & Profile Sta 1765+00 to Sta 1776+00	Design	
2	1	Civil	Road Drawings	4.2.6	Dulles Greenway Plan & Profile Sta 1776+00 to Sta 1787+00	Design	
2	1	Civil	Road Drawings	4.2.6	Dulles Greenway Plan & Profile Sta 1787+00 to Sta 1792+00	Design	
2	1	Civil	Road Drawings	4.2.6	Dulles Greenway Plan & Profile Sta 1813+00 to Sta 1820+00	Design	
2	1	Civil	Road Drawings	4.2.6	Dulles Greenway Plan & Profile Sta 1820+00 to Sta 1827+00	Design	
2	1	Civil	Road Drawings	4.2.6	Dulles Greenway Plan & Profile Sta 1834+00 to Sta 1844+00	Design	
2	1	Civil	Road Drawings	4.2.6	Dulles Greenway Plan & Profile Sta 1844+00 to Sta 1854+00	Design	
2	1	Civil	Road Drawings	4.2.6	Dulles Greenway Plan & Profile Sta 1854+00 to Sta 1862+00	Design	
2	1	Civil	Road Drawings	4.2.6	Dulles Greenway Plan & Profile Sta 1862+00 to Sta 1870+00	Design	
2	1	Civil	Road Drawings	4.2.6	Dulles Greenway Plan & Profile Sta 1896+00 to Sta 1907+30	Design	
2	1	Civil	Road Drawings	4.2.6	Dulles Greenway Plan & Profile Sta 1907+30 to Sta 1918+60	Design	
2	1	Civil	Road Drawings	4.2.6	Dulles Greenway Plan & Profile Sta 1918+60 to Sta 1930+00	Design	
2	1	Civil	Road Drawings	4.2.6	Access Road to Airport WB and EB Sect. and Details Sht 1	Design	
2	1	Civil	Road Drawings	4.2.6	Access Road to Airport WB and EB Sect. and Details Sht 2	Design	
2	1	Civil	Road Drawings	4.2.6	Access Road to TPSS #12	Design	
2	1	Civil	Road Drawings	4.2.6	Access Road to TPSS #13	Design	
2	1	Civil	Road Drawings	4.2.6	Access Road to TPSS #15	Design	
2	1	Civil	Road Drawings	4.2.6	Access Road to TPSS #19\RTC 13	Design	
2	2	Civil	Road Drawings	4.2.6	Road Grading Plan and Profile Yard 15 Station Sht 1 of 3	Design	
2	2	Civil	Road Drawings	4.2.6	Road Grading Plan and Profile Yard 15 Station Sht 2 of 3	Design	
2	2	Civil	Road Drawings	4.2.6	Road Grading Plan and Profile Yard 15 Station Sht 3 of 3	Design	
2	3	Civil	Road Drawings	4.2.6	Road Grading Plan and Profile Reston Parkway Station Sht 1 of 2	Design	
2	3	Civil	Road Drawings	4.2.6	Road Grading Plan and Profile Reston Parkway Station Sht 2 of 2	Design	
2	3	Civil	Road Drawings	4.2.6	Road Grading Plan and Profile Herndon Monroe Station	Design	
2	3	Civil	Road Drawings	4.2.6	Road Cross Sections at Herndon Monroe Station	Design	
2	3	Civil	Road Drawings	4.2.6	Road Grading. Plan and Profile Route 28 Station Sht 1 of 2	Design	
2	3	Civil	Road Drawings	4.2.6	Road Grading Plan and Profile Route 28 Station Sht 2 of 2	Design	
2	3	Civil	Road Drawings	4.2.6	Road Grading. Plan and Profile Dulles Airport Station Sht 1 of 2	Design	
2	3	Civil	Road Drawings	4.2.6	Road Grading Plan and Profile Dulles Airport Station Sht 2 of 2	Design	
2	3	Civil	Road Drawings	4.2.6	Road Grading Plan and Profile Route 606 Station Sht 1	Design	
2	3	Civil	Road Drawings	4.2.6	Road Grading Plan and Profile Route 606 Station Sht 2	Design	
				4.2.6 Total			108
1	1	Civil	Road Drawings	4.2.7	Detour Around Excavation Striping Plan	Design	5
1	1	Civil	Road Drawings	4.2.7	Detour Around Excavation Details	Design	
1	1	Civil	Road Drawings	4.2.7	Detour Around Excavation Area Sht 1 of 2	Design	
1	1	Civil	Road Drawings	4.2.7	Maint. of Traffic during Constr. for the above Rds.	Design	
1	1	Civil	Road Drawings	4.2.7	Maint. of Traffic during Constr. for the above Rds.	Design	
1	1	Civil	Traffic Control	4.2.7	Maintenance of Access and Traffic Control Sht. 1	Design	9
1	1	Civil	Traffic Control	4.2.7	Maintenance of Access and Traffic Control Sht. 2	Design	
1	3	Civil	Traffic Control	4.2.7	Road Traffic Ctrl. Wiehle Avenue Station	Design	
2	1	Civil	Traffic Control	4.2.7	Maintenance of Access and Traffic Control Sht. 1	Design	
2	1	Civil	Traffic Control	4.2.7	Maintenance of Access and Traffic Control Sht. 2	Design	
2	1	Civil	Traffic Control	4.2.7	Maintenance of Access and Traffic Control Sht. 3	Design	
2	1	Civil	Traffic Control	4.2.7	Maintenance of Access and Traffic Control Sht. 4	Design	
2	1	Civil	Traffic Control	4.2.7	Maintenance of Access and Traffic Control Sht. 5	Design	
2	1	Civil	Traffic Control	4.2.7	Maintenance of Access and Traffic Control Sht. 6	Design	
				4.2.7 Total			14
1	1	Civil	Sequence of Const	4.2.8	Sequence of Construction Sht. 1	Design	11
1	1	Civil	Sequence of Const	4.2.8	Sequence of Construction Sht. 2	Design	
1	1	Civil	Sequence of Const	4.2.8	Sequence of Construction Sht. 3	Design	

LVL 1	LVL 2	Discipline	Dwg Group		Drawing Description	Drawing Type	Drawing Count by Group
WBS				SOW Para	DESCRIPTION		
						Design, Diag. or Standard	SOW No.
					CIVIL		
1	1	Civil	Sequence of Const	4.2.8	Sequence of Construction Sht. 4	Design	
1	1	Civil	Sequence of Const	4.2.8	Sequence of Construction Sht. 5	Design	
2	1	Civil	Sequence of Const	4.2.8	Sequence of Construction Sht. 1	Design	
2	1	Civil	Sequence of Const	4.2.8	Sequence of Construction Sht. 2	Design	
2	1	Civil	Sequence of Const	4.2.8	Sequence of Construction Sht. 3	Design	
2	1	Civil	Sequence of Const	4.2.8	Sequence of Construction Sht. 4	Design	
2	1	Civil	Sequence of Const	4.2.8	Sequence of Construction Sht. 5	Design	
2	1	Civil	Sequence of Const	4.2.8	Sequence of Construction Sht. 6	Design	
				4.2.8 Total			11
1	1	Civil	General Drawings	4.2.10	Key Plan , Vicinity Plan and Notes	Design	24
1	1	Civil	General Drawings	4.2.10	Index of drawings Sht. 1 of 6	Design	
1	1	Civil	General Drawings	4.2.10	Index of drawings Sht. 2 of 6	Design	
1	1	Civil	General Drawings	4.2.10	Index of drawings Sht. 3 of 6	Design	
1	1	Civil	General Drawings	4.2.10	Index of drawings Sht. 4 of 6	Design	
1	1	Civil	General Drawings	4.2.10	Index of drawings Sht. 5 of 6	Design	
1	1	Civil	General Drawings	4.2.10	Index of drawings Sht. 6 of 6	Design	
1	1	Civil	General Drawings	4.2.10	Layout Index & Cross Reference Plan Sta.727+00 to Sta. 843+60	Design	
1	1	Civil	General Drawings	4.2.10	Layout Index & Cross Reference Plan Sta.843+60 to Sta. 960+20	Design	
1	1	Civil	General Drawings	4.2.10	Layout Index & Cross Reference Plan Sta.960+20 to Sta.1076+80	Design	
1	1	Civil	General Drawings	4.2.10	Layout Index & Cross Reference Plan Sta.1076+80 to Sta.1193+40	Design	
1	1	Civil	General Drawings	4.2.10	Layout Index & Cross Reference Plan Sta.1193+40 to Sta.1310+00	Design	
1	1	Civil	General Drawings	4.2.10	Layout Index & Cross Reference Plan Sta. 556+00 to Sta. 566+00 and Sta.1310+00 to Sta.1332+00	Design	
1	1	Civil	General Drawings	4.2.10	Civil Abbreviations and Notes Sht 1 of 3	Design	
1	1	Civil	General Drawings	4.2.10	Civil Abbreviations and Notes Sht 2 of 3	Design	
1	1	Civil	General Drawings	4.2.10	Civil Abbreviations and Notes Sht 3 of 3	Design	
2	1	Civil	General Drawings	4.2.10	Key Plan , Vecinity Plan and Notrs	Design	
2	1	Civil	General Drawings	4.2.10	Index of drawings Sht. 1 of 7	Design	
2	1	Civil	General Drawings	4.2.10	Index of drawings Sht. 2 of 7	Design	
2	1	Civil	General Drawings	4.2.10	Index of drawings Sht. 3 of 7	Design	
2	1	Civil	General Drawings	4.2.10	Index of drawings Sht. 4 of 7	Design	
2	1	Civil	General Drawings	4.2.10	Index of drawings Sht. 5 of 7	Design	
2	1	Civil	General Drawings	4.2.10	Index of drawings Sht. 6 of 7	Design	
2	1	Civil	General Drawings	4.2.10	Index of drawings Sht. 7 of 7	Design	
2	3	Civil	Grading & Drainage Drawings	4.2.10	Site-Location Plan Reston Parkway Station South Plaza	Design	3
2	3	Civil	Grading & Drainage Drawings	4.2.10	Site-Location Plan Route 28 Station North Plaza	Design	
2	3	Civil	Grading & Drainage Drawings	4.2.10	Site-Location Plan Route 772 Station Sht 1 of 2	Design	
				4.2.10 Total			27
				Grand Total			1,484

LVL 1	LVL 2	Discipline	Dwg Group		Drawing Description	Drawing Type	Drawing Count by Group
WBS				SOW Para	DESCRIPTION		
						Design, Diag. or Standard	SOW No.
					COMMUNICATIONS		
					Design Drawings - Total		198
					4.10.1 Total		104
					4.10.2 Total		91
					4.11.1 Total		3
1	4	Comm	CM-KPI-001	4.10.1	Drawing Index-SH1	Design	
1	4	Comm	CM-KPI-002	4.10.1	Drawing Index-SH2	Design	
1	4	Comm	CM-KPI-003	4.10.1	General Notes / Legend-SH1	Design	
1	4	Comm	CM-GEN-001	4.10.1	Typical Rack & Cabinet Installations	Design	
1	4	Comm	CM-GEN-022	4.10.1	Lineside System Ducts Plan Sht. 1	Design	
1	4	Comm	CM-GEN-023	4.10.1	Lineside System Ducts Plan Sht. 2	Design	
1	4	Comm	CM-GEN-024	4.10.1	Lineside System Ducts Plan Sht. 3	Design	
1	4	Comm	CM-GEN-025	4.10.1	Lineside System Ducts Plan Sht. 4	Design	
1	4	Comm	CM-GEN-026	4.10.1	Lineside System Ducts Plan Sht. 5	Design	
1	4	Comm	CM-MRS-001	4.10.1	System Block Diagram	Design	
1	4	Comm	CM-MRS-007	4.10.1	PSS System Segment Map	Design	
1	4	Comm	CM-MRS-009	4.10.1	Antenna Cable Layout-SH1	Design	
1	4	Comm	CM-MRS-010	4.10.1	Antenna Cable Layout-SH2	Design	
1	4	Comm	CM-MRS-013	4.10.1	Typical Head-end Sections	Design	
1	4	Comm	CM-MRS-015	4.10.1	Typical Tunnel Amp. Config.	Design	
1	4	Comm	CM-MRS-017	4.10.1	Typical Amplifier Mounting	Design	
1	4	Comm	CM-MRS-018	4.10.1	Typical Antenna Cable Mounting	Design	
1	4	Comm	CM-SCADA-001	4.10.1	SCADA Block Diagram	Design	
1	4	Comm	CM-SCADA-004	4.10.1	SCADA Schematic Diagram	Design	
1	4	Comm	CM-FOS-001	4.10.1	FOS Block Diagram	Design	
1	4	Comm	CM-FOS-002	4.10.1	FOS Signal Flow Diagram-SH2	Design	
1	4	Comm	CM-FOS-003	4.10.1	Typical Equipment Rack Layout	Design	
1	4	Comm	CM-FOS-004	4.10.1	FOS Cabling Configuration-SH1	Design	
1	4	Comm	CM-FOS-005	4.10.1	FOS Cabling Configuration-SH2	Design	
1	4	Comm	CM-FOS-006	4.10.1	Typical FOS Distribution Panel Layout	Design	
1	4	Comm	CM-CTS-001	4.10.1	CTS RACK FACE ELEVATIONS	Design	
1	4	Comm	CM-CTS-004	4.10.1	ATC/COMM Interface Cabinet	Design	
1	4	Comm	CM-CTS-005	4.10.1	CTS Block Diagram	Design	
2	4	Comm	CM-GEN-027	4.10.1	Lineside System Ducts Plan Sht. 1	Design	
2	4	Comm	CM-GEN-028	4.10.1	Lineside System Ducts Plan Sht. 2	Design	
2	4	Comm	CM-GEN-029	4.10.1	Lineside System Ducts Plan Sht. 3	Design	
2	4	Comm	CM-GEN-030	4.10.1	Lineside System Ducts Plan Sht. 4	Design	
2	4	Comm	CM-GEN-031	4.10.1	Lineside System Ducts Plan Sht. 5	Design	
2	4	Comm	CM-MRS-003	4.10.1	Antenna Design and Signal Loss	Design	
2	4	Comm	CM-MRS-004	4.10.1	Radio System Block Diagram	Design	
2	4	Comm	CM-MRS-007	4.10.1	PSS System Segment Map	Design	
2	4	Comm	CM-MRS-009	4.10.1	Antenna Cable Layout-SH1	Design	
2	4	Comm	CM-MRS-010	4.10.1	Antenna Cable Layout-SH2	Design	
2	4	Comm	CM-FOS-001	4.10.1	FOS Block Diagram	Design	
2	4	Comm	CM-FOS-002	4.10.1	FOS Signal Flow Diagram	Design	
2	4	Comm	CM-FOS-003	4.10.1	Typical Equipment Rack Layout	Design	
2	4	Comm	CM-FOS-004	4.10.1	FOS Cabling Configuration-SH1	Design	
2	4	Comm	CM-FOS-005	4.10.1	FOS Cabling Configuration-SH2	Design	
2	4	Comm	CM-FOS-006	4.10.1	Typical FOS Distribution Panel Layout	Design	
2	4	Comm	CM-GEN-022	4.10.1	General Plan Yard & Shop "Y15"-SH1	Design	
2	4	Comm	CM-GEN-024	4.10.1	Comm. Room Layout Yard & Shop "Y15"	Design	
2	4	Comm	CM-GEN-025	4.10.1	COMMUNICATIONS ROOM GROUNDING DETAILS	Design	
2	4	Comm	CM-GEN-026	4.10.1	OPERATION MAINTENANCE BUILDING COMMUNICATIONS EQUIPMENT ROOM FLOOR PLAN	Design	

LVL 1	LVL 2	Discipline	Dwg Group		Drawing Description	Drawing Type	Drawing Count by Group
WBS				SOW Para	DESCRIPTION		
						Design, Diag. or Standard	SOW No.
					COMMUNICATIONS		
2	4	Comm	CM-GEN-027	4.10.1	OPERATION MAINTENANCE BUILDING COMMUNICATI0NS EQUIPMENT ROOM AC POWER SINGLE LINE DIAGRAM	Design	
2	4	Comm	CM-GEN-028	4.10.1	OPERATION MAINTENANCE BUILDING COMMUNICATIONS EQUIPMENT ROOM -48VDC POWER	Design	
2	4	Comm	CM-GEN-029	4.10.1	CMNT SHOP FACILITY BUILDING COMMMUNICATIONS EQUIPMENT ROOM FLOOR PIAN	Design	
2	4	Comm	CM-GEN-030	4.10.1	CMNT SHOP FACILITY BUILDING COMMUNICATIONS EQUIPMENT ROOM AC POWER SINGLE LINE DIAGRAM	Design	
2	4	Comm	CM-GEN-031	4.10.1	CMNT SHOP FACILITY BUILDING COMMUNICATIONS EQUIPMENT ROOM -48VDC POWER	Design	
2	4	Comm	CM-YTEL-001	4.10.1	STORAGE YARD TELEPHONE SYSTEM BLOCK DIAGRAM	Design	
2	4	Comm	CM-YTEL-002	4.10.1	STORAGE YARD OPERATIONS MAINTENANCE BUILDING TELEPHONE SYSTEM	Design	
2	4	Comm	CM-YTEL-003	4.10.1	STORAGE YARD OPERAI0NS/ MAINTENANCE BUIIDING TELEPHONE SYSTEM PLAN AND RISER	Design	
2	4	Comm	CM-YTEL-004	4.10.1	STORAGE YARD CMNT SHOP FACILITY 1 BUIIDING TELEPHONE SYSTEM PLAN AND RISER	Design	
2	4	Comm	CM-YTEL-005	4.10.1	STORAGE YARD ANCILARY BUIIDING TELEPHONE SYSTEM PLAN AND RISER	Design	
2	4	Comm	CM-YTEL-006	4.10.1	STORAGE YARD AEMS CIRCUIT	Design	
2	4	Comm	CM-YCCTV-001	4.10.1	STORAGE YARD CONTROL ROOM CLOSED CIRCUIT TELEVISION SYSTEM BLOCK DIAGRAM	Design	
2	4	Comm	CM-YCCTV-002	4.10.1	STORAGE YARD CONTROL ROOM CLOSED CIRCUIT TELEVISION SYSTEM PLAN AND RISER	Design	
2	4	Comm	CM-YCCTV-003	4.10.1	STORAGE YARD CLOSED CIRCUIT TELEVISION SYSTEM INSTALLATION DETAILS	Design	
2	4	Comm	CM-YCCTV-004	4.10.1	STORAGE YARD CLOSED CIRCUIT TELEVISION SYSTEM RACKFACE ELEVATIONS	Design	
2	4	Comm	CM-YMRS-001	4.10.1	STORAGE YARD DISPATCHER'S MOBILE RADIO SYSTEM BLOCK DIAGRAM	Design	
2	4	Comm	CM-YMRS-002	4.10.1	STORAGE YARD GATEHOUSE MOBILE RADIO SYSTEM BLOCK DIAGRAM	Design	
2	4	Comm	CM-YPAS-001	4.10.1	STORAGE YARD PUBIIC ADDRESS SYSTEM BLOCK DIAGRAM	Design	
2	4	Comm	CM-YPAS-002	4.10.1	STORAGE YARD PUBLIC ADDRESS SYSTEM RACKFACE ELEVATION	Design	
2	4	Comm	CM-YPAS-003	4.10.1	STORAGE YARD OPERATIONS/ MAINTENANCE BUILDING PUBLIC ADDRESS SYSTEM PLAN AND RISER	Design	
2	4	Comm	CM-YPAS-004	4.10.1	STORAGE YARD CMNT SHOP FACILITY BUILDING PUBLIC ADDRESS SYSTEM PLAN AND RISER	Design	
2	4	Comm	CM-YPAS-005	4.10.1	STORAGE YARD ANCILLARY BUILDING PUBIC ADDRESS SYSTEM PLAN AND RISER	Design	
2	4	Comm	CM-YTBS-001	4.10.1	STORAGE YARD TALKBACK SYSTEM BLOCK DIAGRAM	Design	
2	4	Comm	CM-YTBS-002	4.10.1	STORAGE YARD TALKBACK STANDARD INSTALLATION DETAILS	Design	
2	4	Comm	CM-YCMS-001	4.10.1	YARD COMMUNICATION CONSOLE RACKFACE ELEVATION	Design	
2	4	Comm	CM-YCMS-002	4.10.1	GATEHOUSE SMADS INSTALLATION	Design	
2	4	Comm	CM-YCMS-003	4.10.1	GATEHOUSE DATA FILE FIRE ZONES	Design	
2	4	Comm	CM-YCMS-004	4.10.1	GATEHOUSE DATA FILE TALKBACK PUBLIC ADDRESS	Design	
2	4	Comm	CM-YCMS-005	4.10.1	GATEHOUSE DATA FILE PUBLIC ADDRESS	Design	
2	4	Comm	CM-YCMS-007	4.10.1	GATEHOUSE DATA FILE CCTV	Design	

LVL 1	LVL 2	Discipline	Dwg Group		Drawing Description	Drawing Type	Drawing Count by Group
WBS				SOW Para	DESCRIPTION		
						Design, Diag. or Standard	SOW No.
					COMMUNICATIONS		
2	4	Comm	CM-YCMS-008	4.10.1	GATEHOUSE DATA FILETELEPHONE LOCATIONS AND NUMBERS SH1	Design	
2	4	Comm	CM-YCMS-009	4.10.1	GATEHOUSE DATA FILE TELEPHONE LOCATIONS AND NUMBERS SH2	Design	
2	4	Comm	CM-YCTS-001	4.10.1	CARRIER TRANSMISSION SYSTEM BLOCK DIAGRAM	Design	
2	4	Comm	CM-YCTS-002	4.10.1	STORAGE YARD CARRIER TRANS- MISSION SYSTEM RACKFACE ELEVATION	Design	
2	4	Comm	CM-YCTS-003	4.10.1	STORAGE YARD DATA SYSTEM BLOCK DIAGRAM	Design	
2	4	Comm	CM-YCTS-004	4.10.1	STORAGE YARD DATA SYSTEM RACKFACE ELEVATION	Design	
2	4	Comm	CM-YFOS-001	4.10.1	FIBER OPTIC SYSTEM BLOCK DIAGRAM	Design	
2	4	Comm	CM-YFOS-002	4.10.1	FIBER OPTIC ADD/DROP REPEATER SIGNAL FLOW DIAGRAM	Design	
2	4	Comm	CM-YFOS-003	4.10.1	STORAGE YARD FIBER OPTIC SYSTEM RACKFACE ELEVATI0N	Design	
2	4	Comm	CM-YFIA-001	4.10.1	TYPICAL FIA SYSTEM BLOCK DIAGRAM	Design	
2	4	Comm	CM-YFIA-003	4.10.1	TYPICAL FIA SCHEMATIC OF INTERFACES	Design	
2	4	Comm	CM-YFIA-005	4.10.1	TYPICAL CONFIGURATIONS OF REMOTE ANCILLARY BUILDINGS	Design	
2	4	Comm	CM-YFIA-006	4.10.1	TYPICAL FIA DETECTOR CONFIGURATIONS IN FIRE AND INTRUSION ZONES	Design	
2	4	Comm	CM-YFIA-008	4.10.1	TYPICAL FIA DISTRIBUTION FRAME LAYOUT	Design	
2	4	Comm	CM-YFIA-009	4.10.1	TEMPORARY FIA SYSTEM	Design	
2	4	Comm	CM-YFIA-010	4.10.1	Locations of Detection Devices-SH1	Design	
2	4	Comm	CM-YFIA-011	4.10.1	Locations of Detection Devices-SH2	Design	
2	4	Comm	CM-YFIA-012	4.10.1	Typical Configurations of Remote Ancillary Buildings	Design	
2	4	Comm	CM-YFIA-013	4.10.1	Typical FIA System Interfaces-SH1	Design	
2	4	Comm	CM-YFIA-014	4.10.1	Typical FIA System Interfaces-SH2	Design	
2	4	Comm	CM-YFIA-018	4.10.1	FIA System Intrusion Alarm Interface Details	Design	
2	4	Comm	CM-YFIA-019	4.10.1	Yard FIA System AC Power Distribution Equipment Layout	Design	
2	4	Comm	CM-YFIA-020	4.10.1	FIA System Typical Yard Annunciator Panel	Design	
2	4	Comm	CM-YFIA-021	4.10.1	FIA System Typical Yard Data Files for Fire Alarm Zones	Design	
2	4	Comm	CM-YFIA-022	4.10.1	FIA System Typical Yard Data Files for Intrusion Zones	Design	
2	4	Comm	CM-YFIA-023	4.10.1	Communications Conduit Riser Diagram for Remote Facilities	Design	
				4.10.1 Total			104
1	4	Comm	CM-GEN-002	4.10.2	General Plan Tysons East Station	Design	
1	4	Comm	CM-GEN-004	4.10.2	Comm. Room Layout Tysons East Station	Design	
1	4	Comm	CM-GEN-005	4.10.2	Gen. Plan Tysons Central Station	Design	
1	4	Comm	CM-GEN-007	4.10.2	Comm. Room LayoutTysons Central Station	Design	
1	4	Comm	CM-GEN-008	4.10.2	Gen. Plan Tysons Cent. C Station	Design	
1	4	Comm	CM-GEN-010	4.10.2	Comm. Room Layout Tysons Cent. C Station	Design	
1	4	Comm	CM-GEN-011	4.10.2	General Plan Tysons West Station	Design	
1	4	Comm	CM-GEN-014	4.10.2	General Plan Wiehle Station	Design	
1	4	Comm	CM-GEN-016	4.10.2	Comm. Room Layout Wiehle Station	Design	
1	4	Comm	CM-GEN-017	4.10.2	TYPICAL PASSENGER STATION MDF CABINET	Design	
1	4	Comm	CM-PA-001	4.10.2	TYPICAL END-TO-END CONFIGURATION	Design	
1	4	Comm	CM-PA-003	4.10.2	TYPICAL KIOSK PUBLIC ADDRESS CONTROL PANEL LAYOUT	Design	
1	4	Comm	CM-PA-006	4.10.2	PA System Rack Layout	Design	
1	4	Comm	CM-PA-009	4.10.2	Typical PA Speaker Locations-SH1	Design	
1	4	Comm	CM-PA-010	4.10.2	Typical PA Speaker Locations-SH2	Design	
1	4	Comm	CM-PA-012	4.10.2	TYPICAL DISPATCHER'S PA CONTROL & ZONE SELECTION PANEL LAYOUT	Design	

LVL 1	LVL 2	Discipline	Dwg Group		Drawing Description	Drawing Type	Drawing Count by Group
WBS				SOW Para	DESCRIPTION		
						Design, Diag. or Standard	SOW No.
					COMMUNICATIONS		
1	4	Comm	CM-PA-016	4.10.2	TYSONS EAST STATION LOUDSPEAKER/PA ZONE LOCATIONS	Design	
1	4	Comm	CM-PA-017	4.10.2	TYSONS CENTRAL STATION LOUDSPEAKER/PA ZONE LOCATIONS	Design	
1	4	Comm	CM-PA-018	4.10.2	TYSONS CENTRAL C STATION LOUDSPEAKER/PA ZONE LOCATIONS	Design	
1	4	Comm	CM-PA-019	4.10.2	TYSONS WEST STATION LOUDSPEAKER/PA ZONE LOCATIONS	Design	
1	4	Comm	CM-PA-020	4.10.2	WIEHLE STATION LOUDSPEAKER/PA ZONE LOCATIONS	Design	
1	4	Comm	CM-TEL-001	4.10.2	West Falls Church Stat.-TEL Adds.	Design	
1	4	Comm	CM-TEL-003	4.10.2	TYSONS EAST STATION PLAN	Design	
1	4	Comm	CM-TEL-005	4.10.2	TYSONS CENTRAL STATION PLAN	Design	
1	4	Comm	CM-TEL-007	4.10.2	TYSONS CENTRAL C STATION PLAN	Design	
1	4	Comm	CM-TEL-009	4.10.2	TYSONS WEST STATION PLAN	Design	
1	4	Comm	CM-TEL-011	4.10.2	WIEHLE STATION PLAN	Design	
1	4	Comm	CM-TEL-013	4.10.2	Tel. Sytem Equip. Rack Layout	Design	
1	4	Comm	CM-TEL-014	4.10.2	Telephone System Cabling-ROW-SH1	Design	
1	4	Comm	CM-TEL-015	4.10.2	Telephone System Cabling-ROW-SH2	Design	
1	4	Comm	CM-TEL-016	4.10.2	Telephone Installation Details	Design	
1	4	Comm	CM-TEL-018	4.10.2	ETS Telephone Configurations	Design	
1	4	Comm	CM-TEL-021	4.10.2	Public Telephone Block Diagram	Design	
1	4	Comm	CM-TEL-022	4.10.2	Public Telephone Locations	Design	
1	4	Comm	CM-TEL-023	4.10.2	PARKING Facility UTF/TELEPHONE CABLE PLAN	Design	
1	4	Comm	CM-TEL-024	4.10.2	PARKING Facility UTF/TELEPHONE CABLE PLAN	Design	
1	4	Comm	CM-CCTV-001	4.10.2	CCTV System Block Diagram	Design	
1	4	Comm	CM-CCTV-003	4.10.2	Typical CCTV System Rack Layout	Design	
1	4	Comm	CM-CCTV-004	4.10.2	Typical CCTV Camera Mezzanine Locations	Design	
1	4	Comm	CM-CCTV-005	4.10.2	Typical CCTV Camera Platform Locations	Design	
1	4	Comm	CM-CCTV-006	4.10.2	Typical Canopy Installations	Design	
1	4	Comm	CM-CCTV-011	4.10.2	DVR SYSTEM	Design	
1	4	Comm	CM-FIA-001	4.10.2	FIA/APAAS Block Diagram	Design	
1	4	Comm	CM-FIA-002	4.10.2	Locations of Detection Devices	Design	
1	4	Comm	CM-FIA-003	4.10.2	Misc Details	Design	
1	4	Comm	CM-PIDS-001	4.10.2	PIDS System Block Diagram	Design	
1	4	Comm	CM-PIDS-003	4.10.2	Typ. Display Installation Locations-SH1	Design	
1	4	Comm	CM-PIDS-004	4.10.2	Typ. Display Installation Locations-SH2	Design	
1	4	Comm	CM-PIDS-005	4.10.2	System Interfaces	Design	
1	4	Comm	CM-PIDS-007	4.10.2	Typ. Display Mounting Config	Design	
1	4	Comm	CM-PERS-001	4.10.2	Interlock /Pers Block Diagram	Design	
1	4	Comm	CM-PERS-002	4.10.2	Typical Call Station Locations-SH 1	Design	
1	4	Comm	CM-PERS-003	4.10.2	Typical Call Station Locations-SH 2	Design	
1	4	Comm	CM-PERS-004	4.10.2	Typical Call Station Locations-SH 3	Design	
1	4	Comm	CM-PERS-005	4.10.2	Misc Details	Design	
1	4	Comm		4.10.2	Network Block Diagram	Design	
1	4	Comm		4.10.2	Network Interfaces	Design	
2	4	Comm	CM-KPI-001	4.10.2	Drawing Index-SH1	Design	
2	4	Comm	CM-KPI-002	4.10.2	Drawing Index-SH2	Design	
2	4	Comm	CM-GEN-002	4.10.2	General Plan Reston Pkwy Station	Design	
2	4	Comm	CM-GEN-004	4.10.2	Comm. Room Layout Reston Pkwy Station	Design	
2	4	Comm	CM-GEN-005	4.10.2	Gen. Plan HERNDON MONROE Station	Design	
2	4	Comm	CM-GEN-007	4.10.2	Comm. Room Layout Herndon Monroe	Design	
2	4	Comm	CM-GEN-008	4.10.2	Gen. Plan Route 28 Station	Design	
2	4	Comm	CM-GEN-010	4.10.2	Comm. Room Layout Route 28 Station	Design	
2	4	Comm	CM-GEN-011	4.10.2	General Plan Dulles Airport Station	Design	
2	4	Comm	CM-GEN-013	4.10.2	Comm. Room Layout Dulles Airport Station	Design	

LVL 1	LVL 2	Discipline	Dwg Group		Drawing Description	Drawing Type	Drawing Count by Group
WBS				SOW Para	DESCRIPTION		
						Design, Diag. or Standard	SOW No.
					COMMUNICATIONS		
2	4	Comm	CM-GEN-014	4.10.2	General Plan Route 606 Station	Design	
2	4	Comm	CM-GEN-016	4.10.2	Comm. Room Layout Route 606 Station	Design	
2	4	Comm	CM-GEN-017	4.10.2	General Plan Route 772 Station	Design	
2	4	Comm	CM-GEN-019	4.10.2	Comm. Room Layout Route 772 Station	Design	
2	4	Comm	CM-PA-015	4.10.2	DISPATCHER'S FACILITY WIRING DIAGRAM END-OF-LINE STATION	Design	
2	4	Comm	CM-TEL-003	4.10.2	RESTON PKWY STATION PLAN 1	Design	
2	4	Comm	CM-TEL-005	4.10.2	HERDON MONROE STATION PLAN	Design	
2	4	Comm	CM-TEL-007	4.10.2	ROUTE 28 STATION PLAN	Design	
2	4	Comm	CM-TEL-009	4.10.2	DULLES AIRPORT STATION PLAN	Design	
2	4	Comm	CM-TEL-011	4.10.2	ROUTE 606 STATION PLAN	Design	
2	4	Comm	CM-TEL-020	4.10.2	ETS Telephone Configurations-SH1	Design	
2	4	Comm	CM-TEL-023	4.10.2	Public Telephone Block Diagram	Design	
2	4	Comm	CM-TEL-024	4.10.2	Public Telephone Locations	Design	
2	4	Comm	CM-TEL-025	4.10.2	Parking Facility UTF/TELEPHONE CABLE PLAN	Design	
2	4	Comm	CM-TEL-026	4.10.2	Parking Facility UTF/TELEPHONE CABLE PLAN	Design	
2	4	Comm	CM-CCTV-001	4.10.2	CCTV System Block Diagram	Design	
2	4	Comm	CM-CCTV-003	4.10.2	Typical CCTV System Rack Layout	Design	
2	4	Comm	CM-CCTV-004	4.10.2	Typical CCTV Camera Mezzanine Locations	Design	
2	4	Comm	CM-CCTV-005	4.10.2	Typical CCTV Camera Platform Locations	Design	
2	4	Comm	CM-CCTV-006	4.10.2	Typical Canopy Installations	Design	
2	4	Comm	CM-CCTV-011	4.10.2	DVR SYSTEM	Design	
2	4	Comm	CM-FIA-001	4.10.2	FIA/APAAS Block Diagram	Design	
2	4	Comm	CM-FIA-002	4.10.2	Locations of Detection Devices	Design	
2	4	Comm	CM-FIA-003	4.10.2	Misc Details	Design	
				4.10.2 Total			91
1	4	Comm	CM-AFC-001	4.11.1	Typical Positioning of AFC Equip.-SH1	Design	
1	4	Comm	CM-AFC-002	4.11.1	Typical Positioning of AFC Equip.-SH2	Design	
1	4	Comm		4.11.1	Typical Duct & Conduit	Design	
				4.11.1 Total			3
				Grand Total			198

LVL 1	LVL 2	Discipline	Dwg Group		Drawing Description	Drawing Type	Drawing Count by Group
WBS				SOW Para	DESCRIPTION		
						Design, Diag. or Standard	SOW No.
					ELECTRICAL GROUNDING & CATH PROTECT		
					Design Drawings - Total		191
					4.8.2 Total		188
					4.11.1 Total		3
1	2	Elect	West Falls Church Yard	4.8.2	One Line Diagram -Modification	Design	10
1	2	Elect	West Falls Church Yard	4.8.2	Maintenance Bldg & Car Wash Power Equipment Layout Sht. 1	Design	
1	2	Elect	West Falls Church Yard	4.8.2	Maintenance Bldg & Car Wash Power Equipment Layout Sht. 2	Design	
1	2	Elect	West Falls Church Yard	4.8.2	Maintenance Bldg & Car Wash Lighting Layout Sht. 1	Design	
1	2	Elect	West Falls Church Yard	4.8.2	Maintenance Bldg & Car Wash Lighting Layout Sht. 2	Design	
1	2	Elect	West Falls Church Yard	4.8.2	Embedded Conduit Layouts	Design	
1	2	Elect	West Falls Church Yard	4.8.2	Yard Modifications Circuit & Conduit Schedule	Design	
1	2	Elect	West Falls Church Yard	4.8.2	U/G Yard Ductbank Layout & Modifications Sht.1	Design	
1	2	Elect	West Falls Church Yard	4.8.2	U/G Yard Ductbank Layout & Modifications Sht.2	Design	
1	2	Elect	West Falls Church Yard	4.8.2	Connector/Tunnel Lighting & Embedded Conduit	Design	
1	2	Elect	TPSS, TBS & TCR	4.8.2	Prototype TPSS, TBS Power, Lighting & Com. Layout Sht. 1	Design	8
1	2	Elect	TPSS, TBS & TCR	4.8.2	Prototype TPSS, TBS Power, Lighting & Com. Layout Sht. 2	Design	
1	2	Elect	TPSS, TBS & TCR	4.8.2	Prototype TPSS, TBS Power, Lighting & Com. Layout Sht. 3	Design	
1	2	Elect	TPSS, TBS & TCR	4.8.2	Prototype TPSS, TBS U/G Conduit Power, Lighting & Communication Layout Sht. 1	Design	
1	2	Elect	TPSS, TBS & TCR	4.8.2	Prototype TPSS, TBS U/G Conduit Power, Lighting & Communication Layout Sht. 2	Design	
1	2	Elect	TPSS, TBS & TCR	4.8.2	Prototype TPSS, TBS U/G Conduit Power, Lighting & Communication Layout Sht. 3	Design	
1	2	Elect	TPSS, TBS & TCR	4.8.2	Prototype TCR Power, Lighting & Com. Layout	Design	
1	2	Elect	TPSS, TBS & TCR	4.8.2	Prototype TCR U/G Conduit Power, Lighting & Communication Layout	Design	
1	3	Elect	General Drawings	4.8.2	Symbols, Legend & Abbreviations Sh.1	Design	8
1	3	Elect	General Drawings	4.8.2	Symbols, Legend & Abbreviations Sh.2	Design	
1	3	Elect	General Drawings	4.8.2	General Notes - Stations	Design	
1	3	Elect	General Drawings	4.8.2	General Standard Grounding Details	Design	
1	3	Elect	General Drawings	4.8.2	General Standard Lighting Details Sh.1	Design	
1	3	Elect	General Drawings	4.8.2	General Standard Lighting Details Sh.2	Design	
1	3	Elect	General Drawings	4.8.2	Lighting Fixture Schedule Sh.1	Design	
1	3	Elect	General Drawings	4.8.2	Lighting Fixture Schedule Sh.2	Design	
1	3	Elect	Tysons East Station	4.8.2	Station One Line Diag.	Design	30
1	3	Elect	Tysons East Station	4.8.2	One Line Metering & Relay Diag.	Design	
1	3	Elect	Tysons East Station	4.8.2	Switchboards One Line Diagram Sht. 1	Design	
1	3	Elect	Tysons East Station	4.8.2	Switchboards One Line Diagram Sht. 2	Design	
1	3	Elect	Tysons East Station	4.8.2	Switchboards One Line Diagram Sht. 3	Design	
1	3	Elect	Tysons East Station	4.8.2	UPS Schematics/Arrangement	Design	
1	3	Elect	Tysons East Station	4.8.2	Station General Electrical Equipment Layout Plan Sht. 1	Design	
1	3	Elect	Tysons East Station	4.8.2	Station General Electrical Equipment Layout Plan Sht. 2	Design	
1	3	Elect	Tysons East Station	4.8.2	Station General Electrical Equipment Layout Plan Sht. 3	Design	
1	3	Elect	Tysons East Station	4.8.2	Elect Switchgear Room Layout	Design	
1	3	Elect	Tysons East Station	4.8.2	Service Room Plans & Riser Diagram Sht. 1	Design	
1	3	Elect	Tysons East Station	4.8.2	Service Room Plans & Riser Diagram Sht. 2	Design	
1	3	Elect	Tysons East Station	4.8.2	Service Room Plans & Riser Diagram Sht. 3	Design	
1	3	Elect	Tysons East Station	4.8.2	Elevators/Escalators Electrical Layout Sht. 1	Design	
1	3	Elect	Tysons East Station	4.8.2	AEMS Interface Connections	Design	
1	3	Elect	Tysons East Station	4.8.2	Electrical Sections & Details Sh.1	Design	
1	3	Elect	Tysons East Station	4.8.2	Station Lighting Layout Plan Sh.1	Design	
1	3	Elect	Tysons East Station	4.8.2	Station Lighting Layout Plan Sh.2	Design	
1	3	Elect	Tysons East Station	4.8.2	Station Lighting Layout Plan Sh.3	Design	
1	3	Elect	Tysons East Station	4.8.2	Ltg Sections & Details Sh.1	Design	
1	3	Elect	Tysons East Station	4.8.2	Circuit & Conduit Schedule Sh.1	Design	
1	3	Elect	Tysons East Station	4.8.2	Circuit & Conduit Schedule Sh.2	Design	
1	3	Elect	Tysons East Station	4.8.2	Grounding & Bonding Layout Sht. 1	Design	
1	3	Elect	Tysons East Station	4.8.2	Panel Board Schedule Summary Sh.1	Design	
1	3	Elect	Tysons East Station	4.8.2	Embedded Conduits Layouts Sh.1	Design	
1	3	Elect	Tysons East Station	4.8.2	Embedded Conduits Layouts Sh.2	Design	
1	3	Elect	Tysons East Station	4.8.2	One Line Diag & Stndby Pwr-Exterior Ltg	Design	
1	3	Elect	Tysons East Station	4.8.2	Extr. Ltg Layouts & Details-Parking Lot Sht.1	Design	
1	3	Elect	Tysons East Station	4.8.2	Extr. Ltg Layouts & Details-Parking Lot Sht.2	Design	
1	3	Elect	Tysons East Station	4.8.2	Raceway Sched-Parking Lot &Exter. Ltg	Design	
1	3	Elect	Tysons Central C Station	4.8.2	Station One Line Diag.	Design	44
1	3	Elect	Tysons Central C Station	4.8.2	One Line Metering & Relay Diag.	Design	

LVL 1	LVL 2	Discipline	Dwg Group		Drawing Description	Drawing Type	Drawing Count by Group
WBS				SOW Para	DESCRIPTION		
						Design, Diag. or Standard	SOW No.
					ELECTRICAL GROUNDING & CATH PROTECT		
1	3	Elect	Tysons Central C Station	4.8.2	Switchboards One Line Diagram Sht. 1	Design	
1	3	Elect	Tysons Central C Station	4.8.2	Switchboards One Line Diagram Sht. 2	Design	
1	3	Elect	Tysons Central C Station	4.8.2	Switchboards One Line Diagram Sht. 3	Design	
1	3	Elect	Tysons Central C Station	4.8.2	UPS Schematics/Arrangement	Design	
1	3	Elect	Tysons Central C Station	4.8.2	Station General Electrical Equipment Layout Plan Sht. 1	Design	
1	3	Elect	Tysons Central C Station	4.8.2	Station General Electrical Equipment Layout Plan Sht. 2	Design	
1	3	Elect	Tysons Central C Station	4.8.2	Station General Electrical Equipment Layout Plan Sht. 3	Design	
1	3	Elect	Tysons Central C Station	4.8.2	Elect Switchgear Room Layout	Design	
1	3	Elect	Tysons Central C Station	4.8.2	Service Room Plans & Riser Diagram Sht. 1	Design	
1	3	Elect	Tysons Central C Station	4.8.2	Service Room Plans & Riser Diagram Sht. 2	Design	
1	3	Elect	Tysons Central C Station	4.8.2	Service Room Plans & Riser Diagram Sht. 3	Design	
1	3	Elect	Tysons Central C Station	4.8.2	Elevators/Escalators Electrical Layout Sht. 1	Design	
1	3	Elect	Tysons Central C Station	4.8.2	Elevators/Escalators Electrical Layout Sht. 2	Design	
1	3	Elect	Tysons Central C Station	4.8.2	AEMS Interface Connections	Design	
1	3	Elect	Tysons Central C Station	4.8.2	Electrical Sections & Details Sh.1	Design	
1	3	Elect	Tysons Central C Station	4.8.2	Station Lighting Layout Plan Sh.1	Design	
1	3	Elect	Tysons Central C Station	4.8.2	Station Lighting Layout Plan Sh.2	Design	
1	3	Elect	Tysons Central C Station	4.8.2	Station Lighting Layout Plan Sh.3	Design	
1	3	Elect	Tysons Central C Station	4.8.2	Ltg Sections & Details Sh.1	Design	
1	3	Elect	Tysons Central C Station	4.8.2	Circuit & Conduit Schedule Sh.1	Design	
1	3	Elect	Tysons Central C Station	4.8.2	Circuit & Conduit Schedule Sh.2	Design	
1	3	Elect	Tysons Central C Station	4.8.2	Grounding & Bonding Layout Sht. 1	Design	
1	3	Elect	Tysons Central C Station	4.8.2	Panel Board Schedule Summary Sh.1	Design	
1	3	Elect	Tysons Central C Station	4.8.2	Embedded Conduits Layouts Sh.1	Design	
1	3	Elect	Tysons Central C Station	4.8.2	Embedded Conduits Layouts Sh.2	Design	
1	3	Elect	Tysons Central C Station	4.8.2	Embedded Conduits Layouts Sh.3	Design	
1	3	Elect	Tysons Central C Station	4.8.2	One Line Diag & Stndby Pwr-Exterior Ltg	Design	
1	3	Elect	Tysons Central C Station	4.8.2	Extr. Ltg Layouts & Details-Parking Lot	Design	
1	3	Elect	Tysons Central C Station	4.8.2	Raceway Sched-Exter. Ltg	Design	
1	3	Elect	Tysons Central C Station	4.8.2	Platform Approach Lighting Layout	Design	
1	3	Elect	Tysons Central C Station	4.8.2	Tunnel Lighting Layout Sht. 1	Design	
1	3	Elect	Tysons Central C Station	4.8.2	Tunnel Lighting Layout Sht. 2	Design	
1	3	Elect	Tysons Central C Station	4.8.2	Tunnel Lighting Layout Sht. 3	Design	
1	3	Elect	Tysons Central C Station	4.8.2	Tunnel Ventilation One Line	Design	
1	3	Elect	Tysons Central C Station	4.8.2	Tunnel Ventilation & Power Layout Sht.1	Design	
1	3	Elect	Tysons Central C Station	4.8.2	Tunnel Ventilation & Power Layout Sht.2	Design	
1	3	Elect	Tysons Central C Station	4.8.2	Tunnel Ventilation & Power Layout Sht.3	Design	
1	3	Elect	Tysons Central C Station	4.8.2	Tunnel Fans Std. Det. Pwr connections Sht. 1	Design	
1	3	Elect	Tysons Central C Station	4.8.2	Tunnel Fans Std. Det. Pwr connections Sht. 2	Design	
1	3	Elect	Tysons Central C Station	4.8.2	Tunnel Embedded Conduit Layout Sht.1	Design	
1	3	Elect	Tysons Central C Station	4.8.2	Tunnel Embedded Conduit Layout Sht.2	Design	
1	3	Elect	Tysons Central C Station	4.8.2	Tunnel Embedded Conduit Layout Sht.3	Design	
1	3	Elect	Tysons West Station	4.8.2	One Line Diagram & Standby System - Exterior Ltg.	Design	4
1	3	Elect	Tysons West Station	4.8.2	Lighting Layouts & Ltg Sections & Details - Exterior, Parking Lot Sht 1	Design	
1	3	Elect	Tysons West Station	4.8.2	Lighting Layouts & Ltg Sections & Details - Exterior, Parking Lot Sht. 2	Design	
1	3	Elect	Tysons West Station	4.8.2	Circuits & Conduit Schedule - Exterior, Parking Lot & Pedestrian Bridges Lighting Sht. 1	Design	
1	3	Elect	Wiehle Avenue Station	4.8.2	Station One Line Diag.	Design	30
1	3	Elect	Wiehle Avenue Station	4.8.2	One Line Metering & Relay Diag.	Design	
1	3	Elect	Wiehle Avenue Station	4.8.2	Switchboards One Line Diagram Sht. 1	Design	
1	3	Elect	Wiehle Avenue Station	4.8.2	Switchboards One Line Diagram Sht. 2	Design	
1	3	Elect	Wiehle Avenue Station	4.8.2	Switchboards One Line Diagram Sht. 3	Design	
1	3	Elect	Wiehle Avenue Station	4.8.2	UPS Schematics/Arrangement	Design	
1	3	Elect	Wiehle Avenue Station	4.8.2	Station General Electrical Equipment Layout Plan Sht. 1	Design	
1	3	Elect	Wiehle Avenue Station	4.8.2	Station General Electrical Equipment Layout Plan Sht. 2	Design	
1	3	Elect	Wiehle Avenue Station	4.8.2	Station General Electrical Equipment Layout Plan Sht. 3	Design	
1	3	Elect	Wiehle Avenue Station	4.8.2	Elect Switchgear Room Layout	Design	
1	3	Elect	Wiehle Avenue Station	4.8.2	Service Room Plans & Riser Diagram Sht. 1	Design	
1	3	Elect	Wiehle Avenue Station	4.8.2	Service Room Plans & Riser Diagram Sht. 2	Design	
1	3	Elect	Wiehle Avenue Station	4.8.2	Service Room Plans & Riser Diagram Sht. 3	Design	
1	3	Elect	Wiehle Avenue Station	4.8.2	Elevators/Escalators Electrical Layout Sht. 1	Design	
1	3	Elect	Wiehle Avenue Station	4.8.2	AEMS Interface Connections	Design	
1	3	Elect	Wiehle Avenue Station	4.8.2	Electrical Sections & Details Sh.1	Design	
1	3	Elect	Wiehle Avenue Station	4.8.2	Station Lighting Layout Plan Sh.1	Design	
1	3	Elect	Wiehle Avenue Station	4.8.2	Station Lighting Layout Plan Sh.2	Design	

LVL 1	LVL 2	Discipline	Dwg Group		Drawing Description	Drawing Type	Drawing Count by Group
WBS				SOW Para	DESCRIPTION		
						Design, Diag. or Standard	SOW No.
					ELECTRICAL GROUNDING & CATH PROTECT		
1	3	Elect	Wiehle Avenue Station	4.8.2	Station Lighting Layout Plan Sh.3	Design	
1	3	Elect	Wiehle Avenue Station	4.8.2	Ltg Sections & Details Sh.1	Design	
1	3	Elect	Wiehle Avenue Station	4.8.2	Circuit & Conduit Schedule Sh.1	Design	
1	3	Elect	Wiehle Avenue Station	4.8.2	Circuit & Conduit Schedule Sh.2	Design	
1	3	Elect	Wiehle Avenue Station	4.8.2	Grounding & Bonding Layout Sht. 1	Design	
1	3	Elect	Wiehle Avenue Station	4.8.2	Panel Board Schedule Summary Sh.1	Design	
1	3	Elect	Wiehle Avenue Station	4.8.2	Embedded Conduits Layouts Sh.1	Design	
1	3	Elect	Wiehle Avenue Station	4.8.2	Embedded Conduits Layouts Sh.2	Design	
1	3	Elect	Wiehle Avenue Station	4.8.2	Pedestrian Bridge Ltg & Pwr	Design	
1	3	Elect	Wiehle Avenue Station	4.8.2	One Line Diag & Stndby Pwr-Exterior Ltg	Design	
1	3	Elect	Wiehle Avenue Station	4.8.2	Extr. Ltg Layouts & Details-Parking Lot	Design	
1	3	Elect	Wiehle Avenue Station	4.8.2	Raceway Sched-Exter. Ltg	Design	
1	3	Elect	Herndon Monroe Station	4.8.2	One Line Diagram & Standby System - Exterior, Pedestrian Bridges & Parking Structure	Design	8
1	3	Elect	Herndon Monroe Station	4.8.2	Lighting Layouts & Ltg Sections & Details - Exterior, Parking Structure & Pedestrian Bridges Sht. 1	Design	
1	3	Elect	Herndon Monroe Station	4.8.2	Lighting Layouts & Ltg Sections & Details - Exterior, Parking Structure & Pedestrian Bridges Sht. 2	Design	
1	3	Elect	Herndon Monroe Station	4.8.2	Lighting Layouts & Ltg Sections & Details - Exterior, Parking Structure & Pedestrian Bridges Sht. 3	Design	
1	3	Elect	Herndon Monroe Station	4.8.2	Lighting Layouts & Ltg Sections & Details - Exterior, Parking Structure & Pedestrian Bridges Sht. 4	Design	
1	3	Elect	Herndon Monroe Station	4.8.2	Lighting Layouts & Ltg Sections & Details - Exterior, Parking Structure & Pedestrian Bridges Sht. 5	Design	
1	3	Elect	Herndon Monroe Station	4.8.2	Lighting Layouts & Ltg Sections & Details - Exterior, Parking Structure & Pedestrian Bridges Sht. 6	Design	
1	3	Elect	Herndon Monroe Station	4.8.2	Circuits & Conduit Schedule - Exterior, Parking Structure & Pedestrian Bridges Lighting Sht. 1	Design	
1	3	Elect	Dulles Airport Station	4.8.2	Station One Line Diag.	Design	23
1	3	Elect	Dulles Airport Station	4.8.2	One Line Metering & Relay Diag.	Design	
1	3	Elect	Dulles Airport Station	4.8.2	Switchboards One Line Diagram Sht. 1	Design	
1	3	Elect	Dulles Airport Station	4.8.2	Switchboards One Line Diagram Sht. 2	Design	
1	3	Elect	Dulles Airport Station	4.8.2	UPS Schematics/Arrangement	Design	
1	3	Elect	Dulles Airport Station	4.8.2	Station General Electrical Equipment Layout Plan Sht. 1	Design	
1	3	Elect	Dulles Airport Station	4.8.2	Station General Electrical Equipment Layout Plan Sht. 2	Design	
1	3	Elect	Dulles Airport Station	4.8.2	Station General Electrical Equipment Layout Plan Sht. 3	Design	
1	3	Elect	Dulles Airport Station	4.8.2	Elect Switchgear Room Layout	Design	
1	3	Elect	Dulles Airport Station	4.8.2	Service Room Plans & Riser Diagram Sht. 1	Design	
1	3	Elect	Dulles Airport Station	4.8.2	Service Room Plans & Riser Diagram Sht. 2	Design	
1	3	Elect	Dulles Airport Station	4.8.2	Station Lighting Layout Plan Sh.1	Design	
1	3	Elect	Dulles Airport Station	4.8.2	Station Lighting Layout Plan Sh.2	Design	
1	3	Elect	Dulles Airport Station	4.8.2	Platform Approach Lighting Layout	Design	
1	3	Elect	Dulles Airport Station	4.8.2	Tunnel Lighting Layout Sht. 1	Design	
1	3	Elect	Dulles Airport Station	4.8.2	Tunnel Lighting Layout Sht. 2	Design	
1	3	Elect	Dulles Airport Station	4.8.2	Tunnel Lighting Layout Sht. 3	Design	
1	3	Elect	Dulles Airport Station	4.8.2	Tunnel Ventilation One Line	Design	
1	3	Elect	Dulles Airport Station	4.8.2	Tunnel Ventilation & Power Layout Sht.1	Design	
1	3	Elect	Dulles Airport Station	4.8.2	Tunnel Ventilation & Power Layout Sht.2	Design	
1	3	Elect	Dulles Airport Station	4.8.2	Tunnel Ventilation & Power Layout Sht.3	Design	
1	3	Elect	Dulles Airport Station	4.8.2	Tunnel Fans Std. Det. Pwr connections Sht. 1	Design	
1	3	Elect	Dulles Airport Station	4.8.2	Tunnel Fans Std. Det. Pwr connections Sht. 2	Design	
2	2	Elect	Yard & Shop Y15	4.8.2	U/G Duct Bank Layout - Traction Power Sht. 1	Design	23
2	2	Elect	Yard & Shop Y15	4.8.2	U/G Duct Bank Layout - Traction Power Sht. 2	Design	
2	2	Elect	Yard & Shop Y15	4.8.2	U/G Duct Bank Layout - Communication Sht. 1	Design	
2	2	Elect	Yard & Shop Y15	4.8.2	U/G Duct Bank Layout - Communication Sht. 2	Design	
2	2	Elect	Yard & Shop Y15	4.8.2	U/G Duct Bank Layout - Signaling/Train Control Sht. 1	Design	
2	2	Elect	Yard & Shop Y15	4.8.2	U/G Duct Bank Layout - Signaling/Train Control Sht. 2	Design	
2	2	Elect	Yard & Shop Y15	4.8.2	U/G Duct Bank Layout - Yard Lighting Sht. 1	Design	
2	2	Elect	Yard & Shop Y15	4.8.2	U/G Duct Bank Layout - Yard Lighting Sht. 2	Design	
2	2	Elect	Yard & Shop Y15	4.8.2	Yard Lighting Layout & Construction Details Sht. 1	Design	
2	2	Elect	Yard & Shop Y15	4.8.2	Yard Lighting Layout & Construction Details Sht. 2	Design	
2	2	Elect	Yard & Shop Y15	4.8.2	Gate House Power & Lighting Layout	Design	
2	2	Elect	Yard & Shop Y15	4.8.2	Car Wash Bldg. 1/Line Diagram & P & G Layout	Design	
2	2	Elect	Yard & Shop Y15	4.8.2	Rail Service & Inspection Bldg One Line Diagram	Design	
2	2	Elect	Yard & Shop Y15	4.8.2	Rail Service & Inspection Bldg. Power Layout Sht. 1	Design	
2	2	Elect	Yard & Shop Y15	4.8.2	Rail Service & Inspection Bldg. Power Layout Sht. 2	Design	
2	2	Elect	Yard & Shop Y15	4.8.2	Rail Service & Insp. Bldg. Lighting & Conduit Layout Sht. 1	Design	

LVL 1	LVL 2	Discipline	Dwg Group		Drawing Description	Drawing Type	Drawing Count by Group
WBS				SOW Para	DESCRIPTION		
						Design, Diag. or Standard	SOW No.
					ELECTRICAL GROUNDING & CATH PROTECT		
2	2	Elect	Yard & Shop Y15	4.8.2	Rail Service & Insp. Bldg. Lighting & Conduit Layout Sht. 2	Design	
2	2	Elect	Yard & Shop Y15	4.8.2	Yard Fixtures Schedule	Design	
2	2	Elect	Yard & Shop Y15	4.8.2	Vehicular & Storage Bldg. One Line Diagram	Design	
2	2	Elect	Yard & Shop Y15	4.8.2	Operations & Field Base Bldg. & vicinity Facilities One Line Diagram	Design	
2	2	Elect	Yard & Shop Y15	4.8.2	Operations & Field Base Bldg Power Layout Sht. 1	Design	
2	2	Elect	Yard & Shop Y15	4.8.2	Operations & Field Base Bldg Lighting & Riser Diagram Sht. 1	Design	
2	2	Elect	Yard & Shop Y15	4.8.2	TPSS - Power, Lighting & Com. Layout	Design	
				4.8.2 Total			188
1	3	Elect	Tysons East Station	4.11.1	Fare Collection Sys/U/G Conduit Layout	Design	3
1	3	Elect	Tysons Central C Station	4.11.1	Fare Collection Sys/U/G Conduit Layout	Design	
1	3	Elect	Wiehle Avenue Station	4.11.1	Fare Collection Sys/U/G Conduit Layout	Design	
				4.11.1 Total			3
				Grand Total			191

LVL 1	LVL 2	Discipline	Dwg Group		Drawing Description	Drawing Type	Drawing Count by Group
WBS				SOW Para	DESCRIPTION		
						Design, Diag. or Standard	SOW No.
					LANDSCAPING		
					Design Drawings - Total		**45**
					4.6.1 Total		**16**
					4.6.2 Total		**29**
1	3	Landscaping	System-wide	4.6.1	LAYOUT NOTES, SYMBOLS, AND ABBREVIATIONS	Design	8
1	3	Landscaping	Orange Line "O1"	4.6.1	SEGMENT PLANTING PLANS	Design	
1	3	Landscaping	Tysons Corner	4.6.1	SEGMENT PLANTING PLANS	Design	
1	3	Landscaping	Dulles Access Road	4.6.1	SEGMENT PLANTING PLANS	Design	
1	3	Landscaping	ROW Planting	4.6.1	SEGMENT PLANTING PLANS	Design	
1	3	Landscaping	System-wide	4.6.1	PLANTING SCHEDULE	Design	
1	3	Landscaping	Tysons East Station	4.6.1	LANDSCAPE NOTES, SYMBOLS AND ABBREVIATIONS	Design	
1	3	Landscaping	Tysons East Station	4.6.1	TITLE SHEET, INDEX, NOTES, LEGEND	Design	
1	2	Landscaping	Wayside buildings	4.6.1	HARDSCAPE LAYOUT PLANS	Design	8
2	2	Landscaping	Yard & Shop "Y15"	4.6.1	PAVING PLANS (EXTERIOR PEDESTRIAN AREAS)	Design	
2	2	Landscaping	System-wide	4.6.1	TITLE SHEET, INDEX, NOTES, LEGEND	Design	
2	2	Landscaping	System-wide	4.6.1	LAYOUT NOTES, SYMBOLS, AND ABBREVIATIONS	Design	
2	2	Landscaping	System-wide	4.6.1	LANDSCAPE NOTES, SYMBOLS AND ABBREVIATIONS	Design	
2	2	Landscaping	Wayside buildings	4.6.1	HARDSCAPE LAYOUT PLANS	Design	
2	2	Landscaping	Dulles Access Road	4.6.1	SEGMENT PLANTING PLANS	Design	
2	2	Landscaping	Loudoun County	4.6.1	SEGMENT PLANTING PLANS	Design	
				4.6.1 Total			**16**
1	3	Landscaping	West Falls Church Yard-Site facility renovation	4.6.2	HARDSCAPE LAYOUT PLANS	Design	
1	3	Landscaping	Tysons East Station	4.6.2	SITE PLANS (MASTER PLAN)	Design	4
1	3	Landscaping	Tysons East Station	4.6.2	LANDSCAPE MASTER PLAN CONCEPT	Design	
1	3	Landscaping	Tysons East Station	4.6.2	PAVING PLANS (EXTERIOR PEDESTRIAN AREAS)	Design	
1	3	Landscaping	Tysons East Station	4.6.2	PLANTING PLANS	Design	
1	3	Landscaping	Tysons Central D Station	4.6.2	SITE PLANS (MASTER PLAN)	Design	4
1	3	Landscaping	Tysons Central D Station	4.6.2	LANDSCAPE MASTER PLAN CONCEPT	Design	
1	3	Landscaping	Tysons Central D Station	4.6.2	PAVING PLANS (EXTERIOR PEDESTRIAN AREAS)	Design	
1	3	Landscaping	Tysons Central D Station	4.6.2	PLANTING PLANS	Design	
1	3	Landscaping	Tysons Central C Station	4.6.2	SITE PLANS (MASTER PLAN)	Design	4
1	3	Landscaping	Tysons Central C Station	4.6.2	LANDSCAPE MASTER PLAN CONCEPT	Design	
1	3	Landscaping	Tysons Central C Station	4.6.2	PAVING PLANS (EXTERIOR PEDESTRIAN AREAS)	Design	
1	3	Landscaping	Tysons Central C Station	4.6.2	PLANTING PLANS	Design	
1	3	Landscaping	Tysons West Station	4.6.2	SITE PLANS (MASTER PLAN)	Design	4
1	3	Landscaping	Tysons West Station	4.6.2	LANDSCAPE MASTER PLAN CONCEPT	Design	
1	3	Landscaping	Tysons West Station	4.6.2	PAVING PLANS (EXTERIOR PEDESTRIAN AREAS)	Design	
1	3	Landscaping	Tysons West Station	4.6.2	PLANTING PLANS	Design	
1	3	Landscaping	Wiehle Station	4.6.2	SITE PLANS (MASTER PLAN)	Design	4
1	3	Landscaping	Wiehle Station	4.6.2	LANDSCAPE MASTER PLAN CONCEPT	Design	
1	3	Landscaping	Wiehle Station	4.6.2	PAVING PLANS (EXTERIOR PEDESTRIAN AREAS)	Design	
1	3	Landscaping	Wiehle Station	4.6.2	PLANTING PLANS	Design	
2	2	Landscaping	Yard & Shop "Y15"	4.6.2	SITE PLANS (MASTER PLAN)	Design	3
2	2	Landscaping	Yard & Shop "Y15"	4.6.2	LANDSCAPE MASTER PLAN CONCEPT	Design	
2	2	Landscaping	Yard & Shop "Y15"	4.6.2	PLANTING PLANS	Design	
2	3	Landscaping	Reston Pkwy Station	4.6.2	LANDSCAPE MASTER PLAN CONCEPT	Design	1
2	3	Landscaping	Herndon Monroe Station	4.6.2	LANDSCAPE MASTER PLAN CONCEPT	Design	1
2	3	Landscaping	Route 28 Station	4.6.2	LANDSCAPE MASTER PLAN CONCEPT	Design	1
2	3	Landscaping	Route 606 Station	4.6.2	LANDSCAPE MASTER PLAN CONCEPT	Design	1
2	3	Landscaping	Route 772 Station	4.6.2	LANDSCAPE MASTER PLAN CONCEPT	Design	1
				4.6.2 Total			**29**
				Grand Total			**45**

LVL 1	LVL 2	Discipline	Dwg Group		Drawing Description	Drawing Type	Drawing Count by Group
WBS				SOW Para	DESCRIPTION		
						Design, Diag. or Standard	SOW No.
					MECHANICAL		
					Design Drawings - Total		**178**
					4.7.1 Total		**22**
					4.7.2 Total		**156**
1	2	Mech	Tysons Central C Station	4.7.1	Tyson Central C Tunnel Ventilation Schedule sht. 1	Diagrammatic	2
1	2	Mech	Tysons Central C Station	4.7.1	Tyson Central C Tunnel Ventilation Schedule sht. 2	Diagrammatic	
1	3	Mech	Tysons Central C Station	4.7.1	Tyson Central C Station Tunnel Ventilation General Arrangement	Design	
1	3	Mech	Tysons Central C Station	4.7.1	Tyson Central C Station Tunnel Ventilation sht 1	Design	
1	3	Mech	Tysons Central C Station	4.7.1	Tyson Central C Station Tunnel Ventilation sht 2	Design	
1	3	Mech	Tysons Central C Station	4.7.1	Tyson Central C Station Tunnel Ventilation sht 3	Design	
1	3	Mech	Tysons Central C Station	4.7.1	Tyson Central C Station Tunnel Ventilation sht 4	Design	
1	3	Mech	Tysons Central C Station	4.7.1	Tyson Central C Station Tunnel Ventilation sht 5	Design	
1	3	Mech	Tysons Central C Station	4.7.1	Tyson Central C Station Tunnel Ventilation Fan Room Plan sht 1	Design	
1	3	Mech	Tysons Central C Station	4.7.1	Tyson Central C Station Tunnel Ventilation Fan Room Plan sht 2	Design	
1	3	Mech	Tysons Central C Station	4.7.1	Tyson Central C Station Tunnel Ventilation Cross Passage Plan	Design	
1	3	Mech	Tysons Central C Station	4.7.1	Tyson Central C Station Tunnel Ventilation Sections & Details sht 1	Design	
1	3	Mech	Tysons Central C Station	4.7.1	Tyson Central C Station Tunnel Ventilation Sections & Details sht 2	Design	
1	3	Mech	Tysons Central C Station	4.7.1	Tyson Central C Station Tunnel Ventilation Sections & Details sht 3	Design	
2	3	Mech	Dulles Airport Station	4.7.1	Dulles Airport Station Tunel Ventilation General Arrangement	Design	8
2	3	Mech	Dulles Airport Station	4.7.1	Dulles Airport Station Tunnel Ventilation sht 1	Design	
2	3	Mech	Dulles Airport Station	4.7.1	Dulles Airport Station Tunnel Ventilation sht 2	Design	
2	3	Mech	Dulles Airport Station	4.7.1	Dulles Airport Station Tunnel Ventilation sht 3	Design	
2	3	Mech	Dulles Airport Station	4.7.1	Dulles Airport Station Tunnel Ventilation sht 4	Design	
2	3	Mech	Dulles Airport Station	4.7.1	Dulles Airport Station Tunnel Ventilation sht 5	Design	
2	3	Mech	Dulles Airport Station	4.7.1	Dulles Airport Station Tunel Ventilation Fan Room Plan sht 1	Design	
2	3	Mech	Dulles Airport Station	4.7.1	Dulles Airport Station Tunel Ventilation Cross Passage Plan	Design	
				4.7.1 Total			**22**
1	2	Mech	Traction Power Substation	4.7.2	Traction Power Station HVAC Sht 1	Design	3
1	2	Mech	Traction Power Substation	4.7.2	Traction Power Station Airflow & Control Diagram	Diagrammatic	
1	2	Mech	Traction Power Substation	4.7.2	Traction Power Station FP	Design	
1	2	Mech	Tie Breaker Station	4.7.2	Tie Breaker Airflow & Control Diagram	Diagrammatic	3
1	2	Mech	Tie Breaker Station	4.7.2	Tie Breaker Station HVAC Sht 1	Design	
1	2	Mech	Tie Breaker Station	4.7.2	Tie Breaker Station FP	Design	
1	2	Mech	West Falls Church Yard	4.7.2	West Fall Church Airflow & Control Diagram sht 1	Diagrammatic	13
1	2	Mech	West Falls Church Yard	4.7.2	West Fall Church Airflow & Control Diagram sht 2 of 2	Diagrammatic	
1	2	Mech	West Falls Church Yard	4.7.2	West Fall Church HVAC Schedules Sht 1	Diagrammatic	
1	2	Mech	West Falls Church Yard	4.7.2	West Fall Church Plumbing Riser Diagram Sht 1	Diagrammatic	
1	2	Mech	West Falls Church Yard	4.7.2	West Fall Church Plumbing Riser Diagram Sht 2	Diagrammatic	
1	2	Mech	West Falls Church Yard	4.7.2	West Fall Church Fire Protection Riser Diagram sht 2	Diagrammatic	
1	2	Mech	West Falls Church Yard	4.7.2	West Fall Church Fire Protection Riser Diagram sht 1	Diagrammatic	
1	2	Mech	West Falls Church Yard	4.7.2	West Fall Church Ground Floor HVAC sht 1	Design	
1	2	Mech	West Falls Church Yard	4.7.2	West Fall Church Ground Floor HVAC sht 2	Design	
1	2	Mech	West Falls Church Yard	4.7.2	West Fall Church HVAC Sections Sht 1	Design	
1	2	Mech	West Falls Church Yard	4.7.2	West Fall Church Ground Floor Plumbing sht 1	Design	
1	2	Mech	West Falls Church Yard	4.7.2	West Fall Church Ground Floor Plumbing sht 2	Design	
1	2	Mech	West Falls Church Yard	4.7.2	West Fall Church Fire Protection sht 1	Design	
1	2	Mech	Tysons Central C Station	4.7.2	Tyson Central C Station HVAC Schedule sht. 1	Diagrammatic	37
1	2	Mech	Tysons Central C Station	4.7.2	Tyson Central C Station HVAC Schedule sht. 2	Diagrammatic	
1	3	Mech	Tysons Central C Station	4.7.2	Tyson Central C Station/Tunnel HVAC Airflow & Control Diagram sht 1	Diagrammatic	
1	3	Mech	Tysons Central C Station	4.7.2	Tyson Central C Station/Tunnel HVAC Airflow & Control Diagram sht 2	Diagrammatic	
1	3	Mech	Tysons Central C Station	4.7.2	Tyson Central C Station/Tunnel HVAC Airflow & Control Diagram sht 3	Diagrammatic	
1	3	Mech	Tysons Central C Station	4.7.2	Tyson Central C Station/Tunnel HVAC Airflow & Control Diagram sht 4	Diagrammatic	
1	3	Mech	Tysons Central C Station	4.7.2	Tyson Central C Station/Tunnel HVAC Airflow & Control Diagram sht 5	Diagrammatic	
1	3	Mech	Tysons Central C Station	4.7.2	Tyson Central C Station/Tunnel HVAC Airflow & Control Diagram sht 6	Diagrammatic	
1	3	Mech	Tysons Central C Station	4.7.2	Tyson Central C Station/Tunnel HVAC Airflow & Control Diagram sht 7	Diagrammatic	
1	3	Mech	Tysons Central C Station	4.7.2	Tyson Central C Station/Tunnel HVAC Airflow & Control Diagram sht 8	Diagrammatic	
1	3	Mech	Tysons Central C Station	4.7.2	Tyson Central C Station Chilled Water Flow & Control Diagram sht 1	Diagrammatic	
1	3	Mech	Tysons Central C Station	4.7.2	Tyson Central C Station Chilled Water Flow & Control Diagram sht 2	Diagrammatic	
1	3	Mech	Tysons Central C Station	4.7.2	Tyson Central C Station Chilled Water Flow & Control Diagram sht 3	Diagrammatic	
1	3	Mech	Tysons Central C Station	4.7.2	Tyson Central C Station Chilled Water Schedule	Diagrammatic	
1	3	Mech	Tysons Central C Station	4.7.2	Tyson Central C Station Plumbing Riser Diagram sht 1	Diagrammatic	
1	3	Mech	Tysons Central C Station	4.7.2	Tyson Central C Station Plumbing Riser Diagram sht 2	Diagrammatic	
1	3	Mech	Tysons Central C Station	4.7.2	Tyson Central C Station FP Riser Diagram sht 1	Diagrammatic	
1	3	Mech	Tysons Central C Station	4.7.2	Tyson Central C Station FP Riser Diagram sht 2	Diagrammatic	
1	3	Mech	Tysons Central C Station	4.7.2	Tyson Central C Station/Tunnel HVAC sht 1	Design	

LVL 1	LVL 2	Discipline	Dwg Group		Drawing Description	Drawing Type	Drawing Count by Group
WBS				SOW Para	DESCRIPTION		
						Design, Diag. or Standard	SOW No.
					MECHANICAL		
1	3	Mech	Tysons Central C Station	4.7.2	Tyson Central C Station/Tunnel HVAC sht 2	Design	
1	3	Mech	Tysons Central C Station	4.7.2	Tyson Central C Station/Tunnel HVAC sht 3	Design	
1	3	Mech	Tysons Central C Station	4.7.2	Tyson Central C Station/Tunnel HVAC sht 4	Design	
1	3	Mech	Tysons Central C Station	4.7.2	Tyson Central C Station/Tunnel HVAC sht 5	Design	
1	3	Mech	Tysons Central C Station	4.7.2	Tyson Central C Station/Tunnel HVAC sht 6	Design	
1	3	Mech	Tysons Central C Station	4.7.2	Tyson Central C Station Chilled Water Sht 1	Design	
1	3	Mech	Tysons Central C Station	4.7.2	Tyson Central C Station Chilled Water Sht 2	Design	
1	3	Mech	Tysons Central C Station	4.7.2	Tyson Central C Station Chilled Water Sht 3	Design	
1	3	Mech	Tysons Central C Station	4.7.2	Tyson Central C Station Chilled Water Sht 4	Design	
1	3	Mech	Tysons Central C Station	4.7.2	Tyson Central C Station Plumbing sht 1	Design	
1	3	Mech	Tysons Central C Station	4.7.2	Tyson Central C Station Plumbing sht 2	Design	
1	3	Mech	Tysons Central C Station	4.7.2	Tyson Central C Station Plumbing sht 3	Design	
1	3	Mech	Tysons Central C Station	4.7.2	Tyson Central C Station Plumbing sht 4	Design	
1	3	Mech	Tysons Central C Station	4.7.2	Tyson Central C Station FP sht 1	Design	
1	3	Mech	Tysons Central C Station	4.7.2	Tyson Central C Station FP sht 2	Design	
1	3	Mech	Tysons Central C Station	4.7.2	Tyson Central C Station FP sht 3	Design	
1	3	Mech	Tysons Central C Station	4.7.2	Tyson Central C Station FP sht 4	Design	
1	3	Mech	Tysons Central C Station	4.7.2	Tyson Central C Station Misc. mechanical Sht 1	Design	
1	3	Mech	Tysons West Station	4.7.2	Tyson West Station HVAC sht 1	Design	7
1	3	Mech	Tysons West Station	4.7.2	Tyson West Station HVAC sht 2	Design	
1	3	Mech	Tysons West Station	4.7.2	Tyson West Station Plumbing	Design	
1	3	Mech	Tysons West Station	4.7.2	Tyson West Station FP	Design	
1	3	Mech	Tysons West Station	4.7.2	Tysons West Stations FP / Plumbing	Design	
1	3	Mech	Tysons West Station	4.7.2	Tyson West Station Airflow & Control Diagram	Diagrammatic	
1	3	Mech	Tysons West Station	4.7.2	Tyson West Station HVAC Schedule	Diagrammatic	
1	3	Mech	Wiehle Avenue Station	4.7.2	Wiehle Station Airflow & Control Diagram	Diagrammatic	7
1	3	Mech	Wiehle Avenue Station	4.7.2	Wiehle Station HVAC Schedule	Diagrammatic	
1	3	Mech	Wiehle Avenue Station	4.7.2	Wiehle Avenue Station HVAC Sht 1	Design	
1	3	Mech	Wiehle Avenue Station	4.7.2	Wiehle Avenue Station HVAC Sht 1	Design	
1	3	Mech	Wiehle Avenue Station	4.7.2	Wiehle Avenue Station Plumbing	Design	
1	3	Mech	Wiehle Avenue Station	4.7.2	Wiehle Avenue Station FP	Design	
1	3	Mech	Wiehle Avenue Station	4.7.2	Wiehle Avenue Station ~~common~~ FP / Plumbing	Design	
1	4	Mech	General Drawings	4.7.2	Index Sheet	Diagrammatic	3
1	4	Mech	General Drawings	4.7.2	Symboles and Legend Sheet	Diagrammatic	
1	4	Mech	General Drawings	4.7.2	General Notes Sheet	Diagrammatic	
2	2	Mech	Ops & Field Bldg	4.7.2	Operation and Field Base Bldg. Airflow & Control Diagram sht 1	Diagrammatic	18
2	2	Mech	Ops & Field Bldg	4.7.2	Operation and Field Base Bldg. Airflow & Control Diagram sht 2	Diagrammatic	
2	2	Mech	Ops & Field Bldg	4.7.2	Operation and Field Base Bldg. Airflow & Control Diagram sht 3	Diagrammatic	
2	2	Mech	Ops & Field Bldg	4.7.2	Operation and Field Base Bldg. Airflow & Control Diagram sht 4	Diagrammatic	
2	2	Mech	Ops & Field Bldg	4.7.2	Operation and Field Base Bldg. Plumbing Riser Diagram Sht 1	Diagrammatic	
2	2	Mech	Ops & Field Bldg	4.7.2	Operation and Field Base Bldg. Plumbing Riser Diagram Sht 2	Diagrammatic	
2	2	Mech	Ops & Field Bldg	4.7.2	Operation and Field Base Bldg. Fire Protection Riser Diagram sht 1	Diagrammatic	
2	2	Mech	Ops & Field Bldg	4.7.2	Operation and Field Base Bldg. Fire Protection Riser Diagram sht 2	Diagrammatic	
2	2	Mech	Ops & Field Bldg	4.7.2	Operation and Field Base Bldg. Ground Floor HVAC sht 1	Design	
2	2	Mech	Ops & Field Bldg	4.7.2	Operation and Field Base Bldg. Ground Floor HVAC sht 2	Design	
2	2	Mech	Ops & Field Bldg	4.7.2	Operation and Field Base Bldg. Second Floor HVAC sht 1	Design	
2	2	Mech	Ops & Field Bldg	4.7.2	Operation and Field Base Bldg. Second Floor HVAC sht 2	Design	
2	2	Mech	Ops & Field Bldg	4.7.2	Operation and Field Base Bldg. Ground Floor Plumbing sht 1	Design	
2	2	Mech	Ops & Field Bldg	4.7.2	Operation and Field Base Bldg. Ground Floor Plumbing sht 2	Design	
2	2	Mech	Ops & Field Bldg	4.7.2	Operation and Field Base Bldg. Second Floor Plumbing sht 1	Design	
2	2	Mech	Ops & Field Bldg	4.7.2	Operation and Field Base Bldg. Second Floor Plumbing sht 2	Design	
2	2	Mech	Ops & Field Bldg	4.7.2	Operation and Field Base Bldg. Fire Protection sht 1	Design	
2	2	Mech	Ops & Field Bldg	4.7.2	Operation and Field Base Bldg. Fire Protection sht 2	Design	
2	2	Mech	Rail Service & Inspect Bldg	4.7.2	Rail Service and Inspection Bldg. -Site 15 Airflow & Control Diagram sht 1	Diagrammatic	19
2	2	Mech	Rail Service & Inspect Bldg	4.7.2	Rail Service and Inspection Bldg. -Site 15 Airflow & Control Diagram sht 2	Diagrammatic	
2	2	Mech	Rail Service & Inspect Bldg	4.7.2	Rail Service and Inspection Bldg. -Site 15 Plumbing Riser Diagram Sht 1	Diagrammatic	
2	2	Mech	Rail Service & Inspect Bldg	4.7.2	Rail Service and Inspection Bldg. -Site 15 Plumbing Riser Diagram Sht 2	Diagrammatic	
2	2	Mech	Rail Service & Inspect Bldg	4.7.2	Rail Service and Inspection Bldg. -Site 15 Fire Protection Riser Diagram sht 1	Diagrammatic	
2	2	Mech	Rail Service & Inspect Bldg	4.7.2	Rail Service and Inspection Bldg. -Site 15 Ground Floor HVAC sht 1	Design	
2	2	Mech	Rail Service & Inspect Bldg	4.7.2	Rail Service and Inspection Bldg. -Site 15 Ground Floor HVAC sht 2	Design	
2	2	Mech	Rail Service & Inspect Bldg	4.7.2	Rail Service and Inspection Bldg. -Site 15 Second Floor HVAC sht 1	Design	
2	2	Mech	Rail Service & Inspect Bldg	4.7.2	Rail Service and Inspection Bldg. -Site 15 Second Floor HVAC sht 2	Design	
2	2	Mech	Rail Service & Inspect Bldg	4.7.2	Rail Service and Inspection Bldg. -Site 15 HVAC Sections Sht 1	Design	
2	2	Mech	Rail Service & Inspect Bldg	4.7.2	Rail Service and Inspection Bldg. -Site 15 HVAC Sections Sht 2	Design	
2	2	Mech	Rail Service & Inspect Bldg	4.7.2	Rail Service and Inspection Bldg. -Site 15 Ground Floor Plumbing sht 1	Design	
2	2	Mech	Rail Service & Inspect Bldg	4.7.2	Rail Service and Inspection Bldg. -Site 15 Ground Floor Plumbing sht 2	Design	

LVL 1	LVL 2	Discipline	Dwg Group		Drawing Description	Drawing Type	Drawing Count by Group
WBS				SOW Para	DESCRIPTION		
						Design, Diag. or Standard	SOW No.
					MECHANICAL		
2	2	Mech	Rail Service & Inspect Bldg	4.7.2	Rail Service and Inspection Bldg. -Site 15 Second Floor Plumbing sht 1	Design	
2	2	Mech	Rail Service & Inspect Bldg	4.7.2	Rail Service and Inspection Bldg. -Site 15 Second Floor Plumbing sht 2	Design	
2	2	Mech	Rail Service & Inspect Bldg	4.7.2	Rail Service and Inspection Bldg. -Site 15 Second Floor Plumbing sht 3	Design	
2	2	Mech	Rail Service & Inspect Bldg	4.7.2	Rail Service and Inspection Bldg. -Site 15 Second Floor Plumbing sht 4	Design	
2	2	Mech	Rail Service & Inspect Bldg	4.7.2	Rail Service and Inspection Bldg. -Site 15 Fire Protection sht 1	Design	
2	2	Mech	Rail Service & Inspect Bldg	4.7.2	Rail Service and Inspection Bldg. -Site 15 Fire Protection sht 2	Design	
2	2	Mech	Car Wash Building	4.7.2	Car Wash Building HVAC Sht 1	Design	4
2	2	Mech	Car Wash Building	4.7.2	Car Wash Building Plumbing Sht 1	Design	
2	3	Mech	Car Wash Building	4.7.2	Car Wash Building Airflow & Control Diagram	Diagrammatic	
2	3	Mech	Car Wash Building	4.7.2	Car Wash Building Plumbing Riser Diagram	Diagrammatic	
2	3	Mech	Herndon Monroe Station	4.7.2	Herndon Monroe Stations FP / Plumbing	Design	7
2	3	Mech	Herndon Monroe Station	4.7.2	Herndon Monroe Station Parking Structure Plumbing sht 1	Design	
2	3	Mech	Herndon Monroe Station	4.7.2	Herndon Monroe Station Parking Structure Plumbing sht 2	Design	
2	3	Mech	Herndon Monroe Station	4.7.2	Herndon Monroe Station Parking Structure Plumbing sht 3	Design	
2	3	Mech	Herndon Monroe Station	4.7.2	Herndon Monroe Station Parking Structure FP sht 1	Design	
2	3	Mech	Herndon Monroe Station	4.7.2	Herndon Monroe Station Parking Structure FP sht 2	Design	
2	3	Mech	Herndon Monroe Station	4.7.2	Herndon Monroe Station Parking Structure Misc. Sections & Details	Design	
2	3	Mech	Route 28 Station	4.7.2	Route 28 Stations FP / Plumbing	Design	1
2	3	Mech	Dulles Airport Station	4.7.2	Dulles Airport Station /Tunnel Airflow & Control Diagram sht 1	Diagrammatic	32
2	3	Mech	Dulles Airport Station	4.7.2	Dulles Airport Station /Tunnel Airflow & Control Diagram sht 2	Diagrammatic	
2	3	Mech	Dulles Airport Station	4.7.2	Dulles Airport Station /Tunnel Airflow & Control Diagram sht 3	Diagrammatic	
2	3	Mech	Dulles Airport Station	4.7.2	Dulles Airport Station /Tunnel Airflow & Control Diagram sht 4	Diagrammatic	
2	3	Mech	Dulles Airport Station	4.7.2	Dulles Airport Station Chhilled Water Flow & Control Diagram sht 1	Diagrammatic	
2	3	Mech	Dulles Airport Station	4.7.2	Dulles Airport Station Chhilled Water Flow & Control Diagram sht 2	Diagrammatic	
2	3	Mech	Dulles Airport Station	4.7.2	Dulles Airport Station Plumbing Riser Diagram sht 1	Diagrammatic	
2	3	Mech	Dulles Airport Station	4.7.2	Dulles Airport Station Plumbing Riser Diagram sht 2	Diagrammatic	
2	3	Mech	Dulles Airport Station	4.7.2	Dulles Airport Station Fire Protection Riser Diagram sht 1	Diagrammatic	
2	3	Mech	Dulles Airport Station	4.7.2	Dulles Airport Station Fire Protection Riser Diagram sht 2	Diagrammatic	
2	3	Mech	Dulles Airport Station	4.7.2	Dulles Airport Station /Tunnel HVAC Plans sht 1	Design	
2	3	Mech	Dulles Airport Station	4.7.2	Dulles Airport Station /Tunnel HVAC Plans sht 2	Design	
2	3	Mech	Dulles Airport Station	4.7.2	Dulles Airport Station /Tunnel HVAC Plans sht 3	Design	
2	3	Mech	Dulles Airport Station	4.7.2	Dulles Airport Station /Tunnel HVAC Plans sht 4	Design	
2	3	Mech	Dulles Airport Station	4.7.2	Dulles Airport Station /Tunnel HVAC Plans sht 5	Design	
2	3	Mech	Dulles Airport Station	4.7.2	Dulles Airport Station /Tunnel HVAC Plans sht 6	Design	
2	3	Mech	Dulles Airport Station	4.7.2	Dulles Airport Station Chilled Water Plans sht 1	Design	
2	3	Mech	Dulles Airport Station	4.7.2	Dulles Airport Station Chilled Water Plans sht 2	Design	
2	3	Mech	Dulles Airport Station	4.7.2	Dulles Airport Station/ Tunnel Plumbing sht 1	Design	
2	3	Mech	Dulles Airport Station	4.7.2	Dulles Airport Station/ Tunnel Plumbing sht 2	Design	
2	3	Mech	Dulles Airport Station	4.7.2	Dulles Airport Station/Tunnel Plumbing sht 3	Design	
2	3	Mech	Dulles Airport Station	4.7.2	Dulles Airport Station/Tunnel Plumbing sht 4	Design	
2	3	Mech	Dulles Airport Station	4.7.2	Dulles Airport Station/Tunnel Plumbing sht 5	Design	
2	3	Mech	Dulles Airport Station	4.7.2	Dulles Airport Station/Tunnel Plumbing sht 6	Design	
2	3	Mech	Dulles Airport Station	4.7.2	Dulles Airport Station/Tunnel Fire Protection sht 1	Design	
2	3	Mech	Dulles Airport Station	4.7.2	Dulles Airport Station/Tunnel Fire Protection sht 2	Design	
2	3	Mech	Dulles Airport Station	4.7.2	Dulles Airport Station/Tunnel Fire Protection sht 3	Design	
2	3	Mech	Dulles Airport Station	4.7.2	Dulles Airport Station/Tunnel Fire Protection sht 4	Design	
2	3	Mech	Dulles Airport Station	4.7.2	Dulles Airport Station/Tunnel Fire Protection sht 5	Design	
2	3	Mech	Dulles Airport Station	4.7.2	Dulles Airport Station/Tunnel Fire Protection sht 6	Design	
2	3	Mech	Dulles Airport Station	4.7.2	Dulles Airport Station/Tunnel Fire Protection sht 7	Design	
2	3	Mech	Dulles Airport Station	4.7.2	Dulles Airport Station/Tunnel Fire Protection sht 8	Design	
2	3	Mech	Route 606 Station	4.7.2	Route 606 Stations FP / Plumbing	Design	1
2	3	Mech	Route 772 Station	4.7.2	Route 772 Stations FP / Plumbing	Design	1
				4.7.2 Total			**156**
				Grand Total			**178**

LVL 1	LVL 2	Discipline	Dwg Group		Drawing Description	Drawing Type	Drawing Count by Group
WBS				SOW Para	DESCRIPTION		
						Design, Diag. or Standard	SOW No.
					STRUCTURAL		
					Design Drawings - Total		438
					4.4.1 Total		92
					4.4.2 Total		346
1	1	Struct	Retaining Walls	4.4.1	Retaining Wall General Notes (All)	Design	72
1	1	Struct	Retaining Walls	4.4.1	Expansion and Contraction Details (All)	Design	
1	1	Struct	Retaining Walls	4.4.1	Misc. Details (All)	Design	
1	1	Struct	Retaining Walls	4.4.1	Ret. Wall Panel Plan and Chart (All)	Design	
1	1	Struct	Retaining Walls	4.4.1	Ret. Wall Panel Plan and Chart (All)	Design	
1	1	Struct	Retaining Walls	4.4.1	Ret. Wall Panel Plan and Chart (All)	Design	
1	1	Struct	Retaining Walls	4.4.1	Ret. Wall Panel Plan and Chart (All)	Design	
1	1	Struct	Retaining Walls	4.4.1	Ret. Wall Cross Sections (All)	Design	
1	1	Struct	Retaining Walls	4.4.1	Ret. Wall Cross Sections (All)	Design	
1	1	Struct	Retaining Walls	4.4.1	Ret. Wall Foundation Plan (All)	Design	
1	1	Struct	Retaining Walls	4.4.1	Ret. Wall Foundation Plan (All)	Design	
1	1	Struct	Retaining Walls	4.4.1	Ret. Wall Retained Section Detail Sheet (All)	Design	
1	1	Struct	Retaining Walls	4.4.1	Ret. Wall Retained Section Detail Sheet (All)	Design	
1	1	Struct	Retaining Walls	4.4.1	Ret. Wall Plan & Elev. Sta. 560+25 to 562+87 (West Falls Ch.)	Design	
1	1	Struct	Retaining Walls	4.4.1	Ret. Wall Plan & Elev. Sta. 563+69 to 566+75 (West Falls Ch.)	Design	
1	1	Struct	Retaining Walls	4.4.1	Ret. Wall Plan & Elev. Sta. 745+70 to 748+65 OB ("O1")	Design	
1	1	Struct	Retaining Walls	4.4.1	Ret. Wall Plan & Elev. Sta. 746+50 to 749+75 ("O1")	Design	
1	1	Struct	Retaining Walls	4.4.1	Ret. Wall Plan & Elev. Sta. 782+80 to 786+50 ("O1")	Design	
1	1	Struct	Retaining Walls	4.4.1	Ret. Wall Plan & Elev. Sta. 799+40 to 804+00 ("O1")	Design	
1	1	Struct	Retaining Walls	4.4.1	Ret. Wall Plan & Elev. Sta. 804+00 to 809+00 ("O1")	Design	
1	1	Struct	Retaining Walls	4.4.1	Ret. Wall Plan & Elev. Sta. 809+00 to 814+00 ("O1")	Design	
1	1	Struct	Retaining Walls	4.4.1	Ret. Wall Plan & Elev. Sta. 814+00 to 819+00 ("O1")	Design	
1	1	Struct	Retaining Walls	4.4.1	Ret. Wall Plan & Elev. Sta. 819+00 to 824+00 ("O1")	Design	
1	1	Struct	Retaining Walls	4.4.1	Ret. Wall Plan & Elev. Sta. 824+00 to 829+00 ("O1")	Design	
1	1	Struct	Retaining Walls	4.4.1	Ret. Wall Plan & Elev. Sta. 829+00 to 834+00 ("O1")	Design	
1	1	Struct	Retaining Walls	4.4.1	Ret. Wall Plan & Elev. Sta. 834+00 to 839+00 ("O1")	Design	
1	1	Struct	Retaining Walls	4.4.1	Ret. Wall Plan & Elev. Sta. 839+00 to 842+50 ("O1")	Design	
1	1	Struct	Retaining Walls	4.4.1	Ret. Wall Plan & Elev. Sta. 844+40 to 849+00 ("O1")	Design	
1	1	Struct	Retaining Walls	4.4.1	Ret. Wall Plan & Elev. Sta. 849+00 to 854+00 ("O1")	Design	
1	1	Struct	Retaining Walls	4.4.1	Ret. Wall Plan & Elev. Sta. 854+00 to 859+00 ("O1")	Design	
1	1	Struct	Retaining Walls	4.4.1	Ret. Wall Plan & Elev. Sta. 859+00 to 860+80 ("O1")	Design	
1	1	Struct	Retaining Walls	4.4.1	Ret. Wall Plan & Elev. Sta. 934+50 to 937+80 ("T6")	Design	
1	1	Struct	Retaining Walls	4.4.1	Ret. Wall Plan & Elev. Sta. 937+80 to 941+98 ("T6")	Design	
1	1	Struct	Retaining Walls	4.4.1	Ret. Wall Plan & Elev. Sta. 994+00 to 998+50 ("T6")	Design	
1	1	Struct	Retaining Walls	4.4.1	Ret. Wall Plan & Elev. Sta. 1043+00 to 1048+40 ("T6")	Design	
1	1	Struct	Retaining Walls	4.4.1	Ret. Wall Plan & Elev. Sta. 1098+00 to 1103+00 ("D1")	Design	
1	1	Struct	Retaining Walls	4.4.1	Ret. Wall Plan & Elev. Sta. 1103+00 to 1108+00 ("D1")	Design	
1	1	Struct	Retaining Walls	4.4.1	Ret. Wall Plan & Elev. Sta. 1108+00 to 1113+00 ("D1")	Design	
1	1	Struct	Retaining Walls	4.4.1	Ret. Wall Plan & Elev. Sta. 1113+00 to 1118+00 ("D1")	Design	
1	1	Struct	Retaining Walls	4.4.1	Ret. Wall Plan & Elev. Sta. 1118+00 to 1123+00 ("D1")	Design	
1	1	Struct	Retaining Walls	4.4.1	Ret. Wall Plan & Elev. Sta. 1123+00 to 1128+00 ("D1")	Design	
1	1	Struct	Retaining Walls	4.4.1	Ret. Wall Plan & Elev. Sta. 1128+00 to 1133+00 ("D1")	Design	
1	1	Struct	Retaining Walls	4.4.1	Ret. Wall Plan & Elev. Sta. 1133+00 to 1138+00 ("D1")	Design	
1	1	Struct	Retaining Walls	4.4.1	Ret. Wall Plan & Elev. Sta. 1138+00 to 1139+50 ("D1")	Design	
1	1	Struct	Retaining Walls	4.4.1	Ret. Wall Plan & Elev. Sta. 1146+00 to 1151+00 ("D1")	Design	
1	1	Struct	Retaining Walls	4.4.1	Ret. Wall Plan & Elev. Sta. 1151+00 to 1156+00 ("D1")	Design	
1	1	Struct	Retaining Walls	4.4.1	Ret. Wall Plan & Elev. Sta. 1156+00 to 1161+00 ("D1")	Design	
1	1	Struct	Retaining Walls	4.4.1	Ret. Wall Plan & Elev. Sta. 1161+00 to 1166+00 ("D1")	Design	
1	1	Struct	Retaining Walls	4.4.1	Ret. Wall Plan & Elev. Sta. 1166+00 to 1171+00 ("D1")	Design	
1	1	Struct	Retaining Walls	4.4.1	Ret. Wall Plan & Elev. Sta. 1171+00 to 1174+25 ("D1")	Design	
1	1	Struct	Retaining Walls	4.4.1	Ret. Wall Plan & Elev. Sta. 1177+20 to 1182+00 ("D1")	Design	
1	1	Struct	Retaining Walls	4.4.1	Ret. Wall Plan & Elev. Sta. 1182+00 to 1187+00 ("D1")	Design	
1	1	Struct	Retaining Walls	4.4.1	Ret. Wall Plan & Elev. Sta. 1187+00 to 1192+00 ("D1")	Design	
1	1	Struct	Retaining Walls	4.4.1	Ret. Wall Plan & Elev. Sta. 1192+00 to 1197+00 ("D1")	Design	
1	1	Struct	Retaining Walls	4.4.1	Ret. Wall Plan & Elev. Sta. 1197+00 to 1202+00 ("D1")	Design	
1	1	Struct	Retaining Walls	4.4.1	Ret. Wall Plan & Elev. Sta. 1202+00 to 1207+00 ("D1")	Design	
1	1	Struct	Retaining Walls	4.4.1	Ret. Wall Plan & Elev. Sta. 1207+00 to 1212+00 ("D1")	Design	
1	1	Struct	Retaining Walls	4.4.1	Ret. Wall Plan & Elev. Sta. 1212+00 to 1217+00 ("D1")	Design	
1	1	Struct	Retaining Walls	4.4.1	Ret. Wall Plan & Elev. Sta. 1217+00 to 1222+00 ("D1")	Design	
1	1	Struct	Retaining Walls	4.4.1	Ret. Wall Plan & Elev. Sta. 1222+00 to 1227+00 ("D1")	Design	
1	1	Struct	Retaining Walls	4.4.1	Ret. Wall Plan & Elev. Sta. 1227+00 to 1229+50 ("D1")	Design	
1	1	Struct	Retaining Walls	4.4.1	Ret. Wall Plan & Elev. Sta. 1232+00 to 1237+00 ("D1")	Design	

LVL 1	LVL 2	Discipline	Dwg Group		Drawing Description	Drawing Type	Drawing Count by Group
WBS				SOW Para	DESCRIPTION		
						Design, Diag. or Standard	SOW No.
					STRUCTURAL		
1	1	Struct	Retaining Walls	4.4.1	Ret. Wall Plan & Elev. Sta. 1237+00 to 1242+00 ("D1")	Design	
1	1	Struct	Retaining Walls	4.4.1	Ret. Wall Plan & Elev. Sta. 1242+00 to 1247+00 ("D1")	Design	
1	1	Struct	Retaining Walls	4.4.1	Ret. Wall Plan & Elev. Sta. 1247+00 to 1252+00 ("D1")	Design	
1	1	Struct	Retaining Walls	4.4.1	Ret. Wall Plan & Elev. Sta. 1252+00 to 1257+00 ("D1")	Design	
1	1	Struct	Retaining Walls	4.4.1	Ret. Wall Plan & Elev. Sta. 1257+00 to 1262+00 ("D1")	Design	
1	1	Struct	Retaining Walls	4.4.1	Ret. Wall Plan & Elev. Sta. 1262+00 to 1267+00 ("D1")	Design	
1	1	Struct	Retaining Walls	4.4.1	Ret. Wall Plan & Elev. Sta. 1267+00 to 1271+00 ("D1")	Design	
1	1	Struct	Retaining Walls	4.4.1	Ret. Wall Plan & Elev. Sta. 1289+75 to 1294+00 ("D1")	Design	
1	1	Struct	Retaining Walls	4.4.1	Ret. Wall Plan & Elev. Sta. 1294+00 to 1299+00 ("D1")	Design	
1	1	Struct	Retaining Walls	4.4.1	Ret. Wall Plan & Elev. Sta. 1299+00 to 1300+00 ("D1")	Design	
1	4	Struct	General Drawings	4.4.1	Lateral Earth Pressure Diagrams Sht 1 of 4	Diagrammatic	20
1	4	Struct	General Drawings	4.4.1	Lateral Earth Pressure Diagrams Sht 2 of 4	Diagrammatic	
1	4	Struct	General Drawings	4.4.1	Lateral Earth Pressure Diagrams Sht 3 of 4	Diagrammatic	
1	4	Struct	General Drawings	4.4.1	Lateral Earth Pressure Diagrams Sht 4 of 4	Diagrammatic	
1	4	Struct	General Drawings	4.4.1	Excavation Support Diagrams Sht 1 of 6	Diagrammatic	
1	4	Struct	General Drawings	4.4.1	Excavation Support Diagrams Sht 2 of 6	Diagrammatic	
1	4	Struct	General Drawings	4.4.1	Excavation Support Diagrams Sht 3 of 6	Diagrammatic	
1	4	Struct	General Drawings	4.4.1	Excavation Support Diagrams Sht 4 of 6	Diagrammatic	
1	4	Struct	General Drawings	4.4.1	Excavation Support Diagrams Sht 5 of 6	Diagrammatic	
1	4	Struct	General Drawings	4.4.1	Excavation Support Diagrams Sht 6 of 6	Diagrammatic	
1	4	Struct	General Drawings	4.4.1	Protection of Existing Structures Diagrams Sht 1 of 8	Diagrammatic	
1	4	Struct	General Drawings	4.4.1	Protection of Existing Structures Diagrams Sht 2 of 8	Diagrammatic	
1	4	Struct	General Drawings	4.4.1	Protection of Existing Structures Diagrams Sht 3 of 8	Diagrammatic	
1	4	Struct	General Drawings	4.4.1	Protection of Existing Structures Diagrams Sht 4 of 8	Diagrammatic	
1	4	Struct	General Drawings	4.4.1	Protection of Existing Structures Diagrams Sht 5 of 8	Diagrammatic	
1	4	Struct	General Drawings	4.4.1	Protection of Existing Structures Diagrams Sht 6 of 8	Diagrammatic	
1	4	Struct	General Drawings	4.4.1	Protection of Existing Structures Diagrams Sht 7 of 8	Diagrammatic	
1	4	Struct	General Drawings	4.4.1	Protection of Existing Structures Diagrams Sht 8 of 8	Diagrammatic	
1	4	Struct	General Drawings	4.4.1	Underpinning Diagrams Sht 1 of 2	Diagrammatic	
1	4	Struct	General Drawings	4.4.1	Underpinning Diagrams Sht 2 of 2	Diagrammatic	
				4.4.1 Total			92
1	2	Struct	West Falls Church	4.4.2	Operations & Maint Building Addition Fdn Plan & Schadule	Design	4
1	2	Struct	West Falls Church	4.4.2	Operations & Maint Building Addition Floor Slab Plans	Design	
1	2	Struct	West Falls Church	4.4.2	Operations & Maint Building Addition Floor & Roof Framing Plans	Design	
1	2	Struct	West Falls Church	4.4.2	Operations & Maint Building Addition Framing Elevations	Design	
1	3	Struct	General Drawings	4.4.2	Structural General Notes	Design	23
1	3	Struct	General Drawings	4.4.2	Structural Abbreviations & Symbols	Design	
1	3	Struct	General Drawings	4.4.2	Typical Details Sheet 1	Design	
1	3	Struct	General Drawings	4.4.2	Typical Details Sheet 2	Design	
1	3	Struct	General Drawings	4.4.2	Typical Details Sheet 3	Design	
1	3	Struct	General Drawings	4.4.2	Glass Elevator -Hydraulic - Framing & Details	Design	
1	3	Struct	General Drawings	4.4.2	Typ Subgrade Station Waterproofing Details Sht 1	Design	
1	3	Struct	General Drawings	4.4.2	Typ Subgrade Station Waterproofing Details Sht 2	Design	
1	3	Struct	General Drawings	4.4.2	Station Canopy / Roof Truss Schedules Sheet 1	Design	
1	3	Struct	General Drawings	4.4.2	Station Canopy / Roof Truss Schedules Sheet 2	Design	
1	3	Struct	General Drawings	4.4.2	Station Canopy / Roof Truss Schedules Sheet 3	Design	
1	3	Struct	General Drawings	4.4.2	Station Canopy / Roof Truss Schedules Sheet 4	Design	
1	3	Struct	General Drawings	4.4.2	Station Canopy / Roof Truss Schedules Sheet 5	Design	
1	3	Struct	General Drawings	4.4.2	Station Canopy / Roof & Framing Details Sheet 1	Design	
1	3	Struct	General Drawings	4.4.2	Station Canopy / Roof & Framing Details Sheet 2	Design	
1	3	Struct	General Drawings	4.4.2	Station Canopy / Roof & Framing Details Sheet 3	Design	
1	3	Struct	General Drawings	4.4.2	Station Canopy / Roof & Framing Details Sheet 4	Design	
1	3	Struct	General Drawings	4.4.2	Station Canopy / Roof & Framing Details Sheet 5	Design	
1	3	Struct	General Drawings	4.4.2	Station Canopy / Roof & Framing Details Sheet 6	Design	
1	3	Struct	General Drawings	4.4.2	Signal Bridge Details	Design	
1	3	Struct	General Drawings	4.4.2	No. 8 Turnout Switch Rod Trough Typ Detail	Design	
1	3	Struct	General Drawings	4.4.2	Parking Lot Control Gates Island - Plan & Det's Sheet 1	Design	
1	3	Struct	General Drawings	4.4.2	Parking Lot Control Gates Island - Plan & Det's Sheet 2	Design	
1	3	Struct	Tie Breaker Station	4.4.2	Tie Breaker Station Plans & Details Sheet 1	Design	2
1	3	Struct	Tie Breaker Station	4.4.2	Tie Breaker Station Plans & Details Sheet 2	Design	
1	3	Struct	Traction Power Substation	4.4.2	Traction Power Substation Sections & Details	Design	7
1	3	Struct	Traction Power Substation	4.4.2	Traction Power Substation Sections & Details	Design	
1	3	Struct	Traction Power Substation	4.4.2	Traction Power Substation Sections & Details	Design	
1	3	Struct	Traction Power Substation	4.4.2	Traction Power Substation Sections & Details	Design	
1	3	Struct	Traction Power Substation	4.4.2	Traction Power Substation Sections & Details	Design	
1	3	Struct	Traction Power Substation	4.4.2	Traction Power Substation Sections & Details	Design	
1	3	Struct	Traction Power Substation	4.4.2	Traction Power Substation Sections & Details	Design	

LVL 1	LVL 2	Discipline	Dwg Group		Drawing Description	Drawing Type	Drawing Count by Group
WBS				SOW Para	DESCRIPTION		
						Design, Diag. or Standard	SOW No.
					STRUCTURAL		
1	3	Struct	Parking Structure	4.4.2	Precast Prestressed Parking Structure Plan, Sect's & Det	Design	7
1	3	Struct	Parking Structure	4.4.2	Precast Prestressed Parking Structure Sect's & Det	Design	
1	3	Struct	Parking Structure	4.4.2	Precast Prestressed Parking Structure Flange conn. Det's	Design	
1	3	Struct	Parking Structure	4.4.2	Precast Prestressed Parking Structure Typ Sections	Design	
1	3	Struct	Parking Structure	4.4.2	Precast Prestressed Parking Structure Typ Sections	Design	
1	3	Struct	Parking Structure	4.4.2	Precast Prestressed Parking Structure Typ Sections	Design	
1	3	Struct	Parking Structure	4.4.2	Precast Prestressed Parking Structure Typ Expansion Jt Det's	Design	
1	3	Struct	Pedestrian Bridges	4.4.2	Prototype Pedestrian Bridge Framing Plans Deck & Roof Sheet 1	Design	8
1	3	Struct	Pedestrian Bridges	4.4.2	Prototype Pedestrian Bridge Framing Plans Deck & Roof Sheet 2	Design	
1	3	Struct	Pedestrian Bridges	4.4.2	Prototype Pedestrian Bridge Longitudinal Section Sheet 1	Design	
1	3	Struct	Pedestrian Bridges	4.4.2	Prototype Pedestrian Bridge Longitudinal Section Sheet 2	Design	
1	3	Struct	Pedestrian Bridges	4.4.2	Prototype Pedestrian Bridge Cross Sections Sheet 1	Design	
1	3	Struct	Pedestrian Bridges	4.4.2	Prototype Pedestrian Bridge Cross Sections Sheet 2	Design	
1	3	Struct	Pedestrian Bridges	4.4.2	Prototype Pedestrian Bridge Superstructure Details Sheet 1	Design	
1	3	Struct	Pedestrian Bridges	4.4.2	Prototype Pedestrian Bridge Superstructure Details Sheet 2	Design	
1	3	Struct	Tysons East Station	4.4.2	South Entrance Pavilion Grade Level & Fdn Plan	Design	36
1	3	Struct	Tysons East Station	4.4.2	South Entrance Pavilion Bridge Level Plan & Details	Design	
1	3	Struct	Tysons East Station	4.4.2	South Entrance Pavilion Roof & Canopy Framing Plan & Det	Design	
1	3	Struct	Tysons East Station	4.4.2	South Entrance Pedestrian Cover Canopy Framing Pan	Design	
1	3	Struct	Tysons East Station	4.4.2	South Entrance Pavilion Sections	Design	
1	3	Struct	Tysons East Station	4.4.2	South Entrance Retaining Wall Plan & Elevation	Design	
1	3	Struct	Tysons East Station	4.4.2	North Entrance Pavilion Grade Level & Fdn Plan & Details	Design	
1	3	Struct	Tysons East Station	4.4.2	North Entrance Pavilion Bridge Level Plan & Details	Design	
1	3	Struct	Tysons East Station	4.4.2	North Entrance Pavilion Roof & Canopy Framing Plan & Det	Design	
1	3	Struct	Tysons East Station	4.4.2	North Entrance Pavilion Sections	Design	
1	3	Struct	Tysons East Station	4.4.2	Pedestrian Bridge General Notes (All)	Design	
1	3	Struct	Tysons East Station	4.4.2	Pedestrian Bridge Foundation Plan	Design	
1	3	Struct	Tysons East Station	4.4.2	Pedestrian Bridge Foundation Details Sheet 1	Design	
1	3	Struct	Tysons East Station	4.4.2	Emergency Stair Plans & Section Sheet 1	Design	
1	3	Struct	Tysons East Station	4.4.2	Emergency Stair Plans & Section Sheet 2	Design	
1	3	Struct	Tysons East Station	4.4.2	Tie Breaker Room Foundation & Slab Plan, Sections & Details	Design	
1	3	Struct	Tysons East Station	4.4.2	Tie Breaker Room Roof Framing Plan, Girt Elevations & Details	Design	
1	3	Struct	Tysons East Station	4.4.2	TP Substation Fdn & Grade Level Plan	Design	
1	3	Struct	Tysons East Station	4.4.2	Station Mezzanine Level Plan Sheet 1	Design	
1	3	Struct	Tysons East Station	4.4.2	Station Mezzanine Level Plan Sheet 2	Design	
1	3	Struct	Tysons East Station	4.4.2	Station Mezzanine Level Plan Sheet 3	Design	
1	3	Struct	Tysons East Station	4.4.2	Station Platform Level Plan Sheet 1	Design	
1	3	Struct	Tysons East Station	4.4.2	Station Platform Level Plan Sheet 2	Design	
1	3	Struct	Tysons East Station	4.4.2	Station Platform Level Plan Sheet 3	Design	
1	3	Struct	Tysons East Station	4.4.2	Station Platform Level Plan Sheet 4	Design	
1	3	Struct	Tysons East Station	4.4.2	Station Canopy / Roof & Framing Plan Sheet 1 (Typical Bays)	Design	
1	3	Struct	Tysons East Station	4.4.2	Station Longitudinal Section Sheet 1	Design	
1	3	Struct	Tysons East Station	4.4.2	Station Longitudinal Section Sheet 2	Design	
1	3	Struct	Tysons East Station	4.4.2	Station Longitudinal Section Sheet 3	Design	
1	3	Struct	Tysons East Station	4.4.2	Station Longitudinal Section Sheet 4	Design	
1	3	Struct	Tysons East Station	4.4.2	Station Cross Sections Sheet 1	Design	
1	3	Struct	Tysons East Station	4.4.2	Station Cross Sections Sheet 2	Design	
1	3	Struct	Tysons East Station	4.4.2	Station Details Sheet 1	Design	
1	3	Struct	Tysons East Station	4.4.2	Station Details Sheet 2	Design	
1	3	Struct	Tysons East Station	4.4.2	Service Room Girt Framing Elevations & Details Sheet 1	Design	
1	3	Struct	Tysons East Station	4.4.2	Service Room Girt Framing Elevations & Details Sheet 2	Design	
1	3	Struct	Tysons Central D Station	4.4.2	South Entrance Pavilion Grade Level & Fdn Plan & Det	Design	33
1	3	Struct	Tysons Central D Station	4.4.2	South Entrance Pavilion Bridge Level Plan & Det	Design	
1	3	Struct	Tysons Central D Station	4.4.2	South Entrance Pavilion Roof & Canopy Framing Plan & Det	Design	
1	3	Struct	Tysons Central D Station	4.4.2	South Entrance Pedestrian Cover Canopy Framing Plan & Det	Design	
1	3	Struct	Tysons Central D Station	4.4.2	South Entrance Pavilion Girt Framing Elevations	Design	
1	3	Struct	Tysons Central D Station	4.4.2	South Entrance Pavilion Sections Sheet 1	Design	
1	3	Struct	Tysons Central D Station	4.4.2	South Entrance Retaining Wall Plan & Elevation	Design	
1	3	Struct	Tysons Central D Station	4.4.2	North Entrance Pavilion Grade Level & Fdn Plan & Det	Design	
1	3	Struct	Tysons Central D Station	4.4.2	North Entrance Pavilion Bridge Level Plan & Det	Design	
1	3	Struct	Tysons Central D Station	4.4.2	North Entrance Pavilion Roof & Canopy Framing Plan & Det	Design	
1	3	Struct	Tysons Central D Station	4.4.2	North Entrance Pavilion Girt Framing Elevations	Design	
1	3	Struct	Tysons Central D Station	4.4.2	North Entrance Pavilion Sections Sheet 1	Design	
1	3	Struct	Tysons Central D Station	4.4.2	Pedestrian Bridge Foundation Plan Sheet 1	Design	
1	3	Struct	Tysons Central D Station	4.4.2	Pedestrian Bridge Foundation Plan Sheet 2	Design	
1	3	Struct	Tysons Central D Station	4.4.2	Pedestrian Bridge Foundation Details Sheet 1	Design	
1	3	Struct	Tysons Central D Station	4.4.2	Pedestrian Bridge Foundation Details Sheet 2	Design	

LVL 1	LVL 2	Discipline	Dwg Group		Drawing Description	Drawing Type	Drawing Count by Group
WBS				SOW Para	DESCRIPTION		
						Design, Diag. or Standard	SOW No.
					STRUCTURAL		
1	3	Struct	Tysons Central D Station	4.4.2	Emergency Stair Plans & Section	Design	
1	3	Struct	Tysons Central D Station	4.4.2	TP Substation Fdn & Grade Level Plan	Design	
1	3	Struct	Tysons Central D Station	4.4.2	Station Mezzanine Level Plan Sheet 1	Design	
1	3	Struct	Tysons Central D Station	4.4.2	Station Mezzanine Level Plan Sheet 2	Design	
1	3	Struct	Tysons Central D Station	4.4.2	Station Platform Level Plan Sheet 1	Design	
1	3	Struct	Tysons Central D Station	4.4.2	Station Platform Level Plan Sheet 2	Design	
1	3	Struct	Tysons Central D Station	4.4.2	Station Platform Level Plan Sheet 3	Design	
1	3	Struct	Tysons Central D Station	4.4.2	Station Platform Level Plan Sheet 4	Design	
1	3	Struct	Tysons Central D Station	4.4.2	Station Canopy / Roof & Framing Plan Sheet 1 (Typical Bays)	Design	
1	3	Struct	Tysons Central D Station	4.4.2	Station Longitudinal Section Sheet 1	Design	
1	3	Struct	Tysons Central D Station	4.4.2	Station Longitudinal Section Sheet 2	Design	
1	3	Struct	Tysons Central D Station	4.4.2	Station Longitudinal Section Sheet 3	Design	
1	3	Struct	Tysons Central D Station	4.4.2	Station Longitudinal Section Sheet 4	Design	
1	3	Struct	Tysons Central D Station	4.4.2	Station Cross Sections Sheet 1	Design	
1	3	Struct	Tysons Central D Station	4.4.2	Station Cross Sections Sheet 2	Design	
1	3	Struct	Tysons Central D Station	4.4.2	Station Details Sheet 1	Design	
1	3	Struct	Tysons Central D Station	4.4.2	Station Details Sheet 2	Design	
1	3	Struct	Tysons Central C Station	4.4.2	South Entrance Pavilion Grade Level & Fdn Plan & Det	Design	39
1	3	Struct	Tysons Central C Station	4.4.2	South Entrance Pavilion Roof & Canopy Framing Plan & Det	Design	
1	3	Struct	Tysons Central C Station	4.4.2	South Entrance Pedestrian Cover Canopy Framing Plan & Det	Design	
1	3	Struct	Tysons Central C Station	4.4.2	South Entrance Pavilion Sections Sheet 1	Design	
1	3	Struct	Tysons Central C Station	4.4.2	South Entrance Retaining Wall Plan & Elevation	Design	
1	3	Struct	Tysons Central C Station	4.4.2	North Entrance Pavilion Grade Level & Fdn Plan & Det	Design	
1	3	Struct	Tysons Central C Station	4.4.2	North Entrance Pavilion Roof & Canopy Framing Plan & Det	Design	
1	3	Struct	Tysons Central C Station	4.4.2	North Entrance Pavilion Sections Sheet 1	Design	
1	3	Struct	Tysons Central C Station	4.4.2	Pedestrian Tunnel Roof Plan	Design	
1	3	Struct	Tysons Central C Station	4.4.2	Pedestrian Tunnel Floor Plan	Design	
1	3	Struct	Tysons Central C Station	4.4.2	Intermediate Level Floor Plan	Design	
1	3	Struct	Tysons Central C Station	4.4.2	Mezzanine Level Roof Plan Sheet 1	Design	
1	3	Struct	Tysons Central C Station	4.4.2	Mezzanine Level Roof Plan Sheet 2	Design	
1	3	Struct	Tysons Central C Station	4.4.2	Tunnel Roof Plan Sheet 1	Design	
1	3	Struct	Tysons Central C Station	4.4.2	Tunnel Roof Plan Sheet 2	Design	
1	3	Struct	Tysons Central C Station	4.4.2	Tunnel Roof Plan Sheet 3	Design	
1	3	Struct	Tysons Central C Station	4.4.2	Mezzanine Level Plan Sheet 1	Design	
1	3	Struct	Tysons Central C Station	4.4.2	Mezzanine Level Plan Sheet 2	Design	
1	3	Struct	Tysons Central C Station	4.4.2	Mezzanine Level Plan Sheet 3	Design	
1	3	Struct	Tysons Central C Station	4.4.2	Platform Level Plan Sheet 1	Design	
1	3	Struct	Tysons Central C Station	4.4.2	Platform Level Plan Sheet 2	Design	
1	3	Struct	Tysons Central C Station	4.4.2	Platform Level Plan Sheet 3	Design	
1	3	Struct	Tysons Central C Station	4.4.2	Platform Level Plan Sheet 4	Design	
1	3	Struct	Tysons Central C Station	4.4.2	Platform Level Plan Sheet 5	Design	
1	3	Struct	Tysons Central C Station	4.4.2	Tunnel Mat Foundation Plan Sheet 1	Design	
1	3	Struct	Tysons Central C Station	4.4.2	Tunnel Mat Foundation Plan Sheet 2	Design	
1	3	Struct	Tysons Central C Station	4.4.2	Tunnel Mat Foundation Plan Sheet 3	Design	
1	3	Struct	Tysons Central C Station	4.4.2	Tunnel Mat Foundation Plan Sheet 4	Design	
1	3	Struct	Tysons Central C Station	4.4.2	Tunnel Mat Foundation Plan Sheet 5	Design	
1	3	Struct	Tysons Central C Station	4.4.2	Station Longitudinal Section Sheet 1	Design	
1	3	Struct	Tysons Central C Station	4.4.2	Station Longitudinal Section Sheet 2	Design	
1	3	Struct	Tysons Central C Station	4.4.2	Station Longitudinal Section Sheet 3	Design	
1	3	Struct	Tysons Central C Station	4.4.2	Station Longitudinal Section Sheet 4	Design	
1	3	Struct	Tysons Central C Station	4.4.2	Station Longitudinal Section Sheet 5	Design	
1	3	Struct	Tysons Central C Station	4.4.2	Station Cross Sections Sheet 1	Design	
1	3	Struct	Tysons Central C Station	4.4.2	Station Cross Sections Sheet 2	Design	
1	3	Struct	Tysons Central C Station	4.4.2	Station Cross Sections Sheet 3	Design	
1	3	Struct	Tysons Central C Station	4.4.2	Station Details Sheet 1	Design	
1	3	Struct	Tysons Central C Station	4.4.2	Station Details Sheet 2	Design	
1	3	Struct	Tysons West Station	4.4.2	South Entrance Pavilion Grade Level & Fdn Plan & Det	Design	24
1	3	Struct	Tysons West Station	4.4.2	South Entrance Pavilion Bridge Level Plan & Det	Design	
1	3	Struct	Tysons West Station	4.4.2	South Entrance Pavilion Roof & Canopy Framing Plan & Det	Design	
1	3	Struct	Tysons West Station	4.4.2	South Entrance Pavilion Sections Sheet 1	Design	
1	3	Struct	Tysons West Station	4.4.2	Pedestrian Bridge Foundation Plan Sheet 2	Design	
1	3	Struct	Tysons West Station	4.4.2	Pedestrian Bridge Foundation Details Sheet 1	Design	
1	3	Struct	Tysons West Station	4.4.2	Pedestrian Bridge Foundation Details Sheet 2	Design	
1	3	Struct	Tysons West Station	4.4.2	Emergency Stair Plans & Section Sheet 1	Design	
1	3	Struct	Tysons West Station	4.4.2	Emergency Stair Plans & Section Sheet 2	Design	
1	3	Struct	Tysons West Station	4.4.2	Station Mezzanine Level Plan Sheet 1	Design	
1	3	Struct	Tysons West Station	4.4.2	Station Mezzanine Level Plan Sheet 2	Design	

LVL 1	LVL 2	Discipline	Dwg Group		Drawing Description	Drawing Type	Drawing Count by Group
WBS				SOW Para	DESCRIPTION		
						Design, Diag. or Standard	SOW No.
					STRUCTURAL		
1	3	Struct	Tysons West Station	4.4.2	Station Mezzanine Level Plan Sheet 3	Design	
1	3	Struct	Tysons West Station	4.4.2	Station Platform Level Plan Sheet 1	Design	
1	3	Struct	Tysons West Station	4.4.2	Station Platform Level Plan Sheet 2	Design	
1	3	Struct	Tysons West Station	4.4.2	Station Platform Level Plan Sheet 3	Design	
1	3	Struct	Tysons West Station	4.4.2	Station Canopy Framing Plan Sheet 1 (Typical Bays)	Design	
1	3	Struct	Tysons West Station	4.4.2	Station Longitudinal Section Sheet 1	Design	
1	3	Struct	Tysons West Station	4.4.2	Station Longitudinal Section Sheet 2	Design	
1	3	Struct	Tysons West Station	4.4.2	Station Longitudinal Section Sheet 3	Design	
1	3	Struct	Tysons West Station	4.4.2	Station Cross Sections Sheet 1	Design	
1	3	Struct	Tysons West Station	4.4.2	Station Cross Sections Sheet 2	Design	
1	3	Struct	Tysons West Station	4.4.2	Station Details Sheet 1	Design	
1	3	Struct	Tysons West Station	4.4.2	Station Details Sheet 2	Design	
1	3	Struct	Tysons West Station	4.4.2	Service Room Girt Framing Elevations & Details	Design	
1	3	Struct	Wiehle Avenue Station	4.4.2	South Entrance Pavilion Grade Level & Fdn Plan & Det	Design	28
1	3	Struct	Wiehle Avenue Station	4.4.2	South Entrance Pavilion Bridge Level Framing Plan & Det	Design	
1	3	Struct	Wiehle Avenue Station	4.4.2	South Entrance Pavilion Roof & Canopy Framing Plan & Det	Design	
1	3	Struct	Wiehle Avenue Station	4.4.2	South Entrance Pavilion Sections Sheet 1	Design	
1	3	Struct	Wiehle Avenue Station	4.4.2	North Entrance Pavilion Grade Level & Fdn Plan & Det	Design	
1	3	Struct	Wiehle Avenue Station	4.4.2	North Entrance Pavilion Bridge Level Framing Plan & Det	Design	
1	3	Struct	Wiehle Avenue Station	4.4.2	North Entrance Pavilion Roof & Canopy Framing Plan & Det	Design	
1	3	Struct	Wiehle Avenue Station	4.4.2	North Entrance Pavilion Sections Sheet 1	Design	
1	3	Struct	Wiehle Avenue Station	4.4.2	Pedestrian Bridge Foundation Plan Sheet 1	Design	
1	3	Struct	Wiehle Avenue Station	4.4.2	Pedestrian Bridge Foundation Plan Sheet 2	Design	
1	3	Struct	Wiehle Avenue Station	4.4.2	Pedestrian Bridge Foundation Details Sheet 1	Design	
1	3	Struct	Wiehle Avenue Station	4.4.2	Pedestrian Bridge Foundation Details Sheet 2	Design	
1	3	Struct	Wiehle Avenue Station	4.4.2	Station Mezzanine Level & Framing Plan Sheet 1	Design	
1	3	Struct	Wiehle Avenue Station	4.4.2	Station Mezzanine Level & Framing Plan Sheet 2	Design	
1	3	Struct	Wiehle Avenue Station	4.4.2	Station Platform Level & Foundation Plan Sheet 1	Design	
1	3	Struct	Wiehle Avenue Station	4.4.2	Station Platform Level & Foundation Plan Sheet 2	Design	
1	3	Struct	Wiehle Avenue Station	4.4.2	Station Platform Level & Foundation Plan Sheet 3	Design	
1	3	Struct	Wiehle Avenue Station	4.4.2	Station Platform Level & Foundation Plan Sheet 4	Design	
1	3	Struct	Wiehle Avenue Station	4.4.2	Station Canopy / Roof & Framing Plan Sheet 1 (Typical Bays)	Design	
1	3	Struct	Wiehle Avenue Station	4.4.2	Station Longitudinal Section Sheet 1	Design	
1	3	Struct	Wiehle Avenue Station	4.4.2	Station Longitudinal Section Sheet 2	Design	
1	3	Struct	Wiehle Avenue Station	4.4.2	Station Longitudinal Section Sheet 3	Design	
1	3	Struct	Wiehle Avenue Station	4.4.2	Station Longitudinal Section Sheet 4	Design	
1	3	Struct	Wiehle Avenue Station	4.4.2	Station Cross Sections Sheet 1	Design	
1	3	Struct	Wiehle Avenue Station	4.4.2	Station Cross Sections Sheet 2	Design	
1	3	Struct	Wiehle Avenue Station	4.4.2	Station Details Sheet 1	Design	
1	3	Struct	Wiehle Avenue Station	4.4.2	Station Details Sheet 2	Design	
1	3	Struct	Wiehle Avenue Station	4.4.2	Service Room Girt Framing Elevations & Details	Design	
2	2	Struct	Traction Power Substation	4.4.2	TPSS Bldg Fdn & Grade Floor Plan, Sections & Details	Design	2
2	2	Struct	Traction Power Substation	4.4.2	TPSS Bldg Roof Plan & Details	Design	
2	2	Struct	General Drawings	4.4.2	Pedestrian Bridge Pile & Foundation Plans	Design	7
2	2	Struct	General Drawings	4.4.2	Pedestrian Bridge Pile & Foundation Schedules & Details	Design	
2	2	Struct	General Drawings	4.4.2	Pedestrian Bridge Deck Plan	Design	
2	2	Struct	General Drawings	4.4.2	Pedestrian Bridge Roof Plan	Design	
2	2	Struct	General Drawings	4.4.2	Pedestrian Bridge Longitudinal Sections	Design	
2	2	Struct	General Drawings	4.4.2	Pedestrian Bridge Cross Sections	Design	
2	2	Struct	General Drawings	4.4.2	Pedestrian Bridge Details	Design	
2	2	Struct	OPS & Field Base Bldg	4.4.2	Oper. & Field Base Bldg Pile Plan Sheet 1	Design	28
2	2	Struct	OPS & Field Base Bldg	4.4.2	Oper. & Field Base Bldg Pile Schedule And Details	Design	
2	2	Struct	OPS & Field Base Bldg	4.4.2	Oper. & Field Base Bldg Foundation Plan	Design	
2	2	Struct	OPS & Field Base Bldg	4.4.2	Oper. & Field Base Bldg Foundation Schedule	Design	
2	2	Struct	OPS & Field Base Bldg	4.4.2	Oper. & Field Base Bldg Foundation Details Sheet 1	Design	
2	2	Struct	OPS & Field Base Bldg	4.4.2	Oper. & Field Base Bldg Grade Slab Plan Sheet 1	Design	
2	2	Struct	OPS & Field Base Bldg	4.4.2	Oper. & Field Base Bldg Grade Slab Plan Sheet 2	Design	
2	2	Struct	OPS & Field Base Bldg	4.4.2	Oper. & Field Base Bldg Grade Slab Plan Sheet 3	Design	
2	2	Struct	OPS & Field Base Bldg	4.4.2	Oper. & Field Base Bldg Grade Slab Plan Sheet 4	Design	
2	2	Struct	OPS & Field Base Bldg	4.4.2	Oper. & Field Base Bldg Grade Slab Sections Sheet 1	Design	
2	2	Struct	OPS & Field Base Bldg	4.4.2	Oper. & Field Base Bldg Grade Slab Sections Sheet 2	Design	
2	2	Struct	OPS & Field Base Bldg	4.4.2	Oper. & Field Base Bldg Grade Slab Details Sheet 1	Design	
2	2	Struct	OPS & Field Base Bldg	4.4.2	Oper. & Field Base Bldg Elevated Slab Plan Sheet 1	Design	
2	2	Struct	OPS & Field Base Bldg	4.4.2	Oper. & Field Base Bldg Elevated Slab Plan Sheet 2	Design	
2	2	Struct	OPS & Field Base Bldg	4.4.2	Oper. & Field Base Bldg Roof Framing Plan Sheet 1	Design	
2	2	Struct	OPS & Field Base Bldg	4.4.2	Oper. & Field Base Bldg Roof Framing Plan Sheet 2	Design	
2	2	Struct	OPS & Field Base Bldg	4.4.2	Oper. & Field Base Bldg Elev.Floor Framing Plan Sheet 1	Design	

LVL 1	LVL 2	Discipline	Dwg Group		Drawing Description	Drawing Type	Drawing Count by Group
WBS				SOW Para	DESCRIPTION		
						Design, Diag. or Standard	SOW No.
					STRUCTURAL		
2	2	Struct	OPS & Field Base Bldg	4.4.2	Oper. & Field Base Bldg Elev.Floor Framing Plan Sheet 2	Design	
2	2	Struct	OPS & Field Base Bldg	4.4.2	Oper. & Field Base Bldg Canopy Framing Plan	Design	
2	2	Struct	OPS & Field Base Bldg	4.4.2	Oper. & Field Base Bldg Canopy Sections & Details	Design	
2	2	Struct	OPS & Field Base Bldg	4.4.2	Oper. & Field Base Bldg Framing Elevations Sheet 1	Design	
2	2	Struct	OPS & Field Base Bldg	4.4.2	Oper. & Field Base Bldg Framing Elevations Sheet 2	Design	
2	2	Struct	OPS & Field Base Bldg	4.4.2	Oper. & Field Base Bldg Framing Elevations Sheet 3	Design	
2	2	Struct	OPS & Field Base Bldg	4.4.2	Oper. & Field Base Bldg Stair Plans, Sect's & Det's Sheet 1	Design	
2	2	Struct	OPS & Field Base Bldg	4.4.2	Oper. & Field Base Bldg Stair Plans, Sect's & Det's Sheet 2	Design	
2	2	Struct	OPS & Field Base Bldg	4.4.2	Oper. & Field Base Bldg Steel Sections & Details Sheet 1	Design	
2	2	Struct	OPS & Field Base Bldg	4.4.2	Oper. & Field Base Bldg Steel Sections & Details Sheet 2	Design	
2	2	Struct	OPS & Field Base Bldg	4.4.2	Oper. & Field Base Bldg Steel Sections & Details Sheet 3	Design	
2	2	Struct	Rail Serv. & Insp Bldg	4.4.2	Rail Serv. & Insp. Bldg Pile Plan Sheet 1	Design	48
2	2	Struct	Rail Serv. & Insp Bldg	4.4.2	Rail Serv. & Insp. Bldg Pile Plan Sheet 2	Design	
2	2	Struct	Rail Serv. & Insp Bldg	4.4.2	Rail Serv. & Insp. Bldg Pile Plan Sheet 3	Design	
2	2	Struct	Rail Serv. & Insp Bldg	4.4.2	Rail Serv. & Insp. Bldg Pile Schedule & Details	Design	
2	2	Struct	Rail Serv. & Insp Bldg	4.4.2	Rail Serv. & Insp. Bldg Foundation Plan Sheet 1	Design	
2	2	Struct	Rail Serv. & Insp Bldg	4.4.2	Rail Serv. & Insp. Bldg Foundation Plan Sheet 2	Design	
2	2	Struct	Rail Serv. & Insp Bldg	4.4.2	Rail Serv. & Insp. Bldg Foundation Plan Sheet 3	Design	
2	2	Struct	Rail Serv. & Insp Bldg	4.4.2	Rail Serv. & Insp. Bldg Grade Floor Slab Plan Sheet 1	Design	
2	2	Struct	Rail Serv. & Insp Bldg	4.4.2	Rail Serv. & Insp. Bldg Grade Floor Slab Plan Sheet 2	Design	
2	2	Struct	Rail Serv. & Insp Bldg	4.4.2	Rail Serv. & Insp. Bldg Grade Floor Slab Plan Sheet 3	Design	
2	2	Struct	Rail Serv. & Insp Bldg	4.4.2	Rail Serv. & Insp. Bldg Grade Floor Slab Plan Sheet 4	Design	
2	2	Struct	Rail Serv. & Insp Bldg	4.4.2	Rail Serv. & Insp. Bldg Grade Floor Slab Plan Sheet 5	Design	
2	2	Struct	Rail Serv. & Insp Bldg	4.4.2	Rail Serv. & Insp. Bldg Grade Floor Slab Plan Sheet 6	Design	
2	2	Struct	Rail Serv. & Insp Bldg	4.4.2	Rail Serv. & Insp. Bldg Grade Floor Slab Plan Sheet 7	Design	
2	2	Struct	Rail Serv. & Insp Bldg	4.4.2	Rail Serv. & Insp. Bldg Grade Floor Slab Plan Sheet 8	Design	
2	2	Struct	Rail Serv. & Insp Bldg	4.4.2	Rail Serv. & Insp. Bldg Grade Floor Slab Plan Sheet 9	Design	
2	2	Struct	Rail Serv. & Insp Bldg	4.4.2	Rail Serv. & Insp. Bldg Grade Floor Slab Plan Sheet 10	Design	
2	2	Struct	Rail Serv. & Insp Bldg	4.4.2	Rail Serv. & Insp. Bldg Grade Floor Slab Plan Sheet 11	Design	
2	2	Struct	Rail Serv. & Insp Bldg	4.4.2	Rail Serv. & Insp. Bldg Grade Floor Slab Plan Sheet 12	Design	
2	2	Struct	Rail Serv. & Insp Bldg	4.4.2	Rail Serv. & Insp. Bldg Grade Floor Slab Sections Sheet 1	Design	
2	2	Struct	Rail Serv. & Insp Bldg	4.4.2	Rail Serv. & Insp. Bldg Grade Floor Slab Sections Sheet 2	Design	
2	2	Struct	Rail Serv. & Insp Bldg	4.4.2	Rail Serv. & Insp. Bldg Grade Floor Slab Sections Sheet 3	Design	
2	2	Struct	Rail Serv. & Insp Bldg	4.4.2	Rail Serv. & Insp. Bldg Grade Floor Slab Sections Sheet 4	Design	
2	2	Struct	Rail Serv. & Insp Bldg	4.4.2	Rail Serv. & Insp. Bldg Grade Floor Slab Sections Sheet 5	Design	
2	2	Struct	Rail Serv. & Insp Bldg	4.4.2	Rail Serv. & Insp. Bldg Grade Floor Slab Sections Sheet 6	Design	
2	2	Struct	Rail Serv. & Insp Bldg	4.4.2	Rail Serv. & Insp. Bldg Grade Floor Slab Details Sheet 1	Design	
2	2	Struct	Rail Serv. & Insp Bldg	4.4.2	Rail Serv. & Insp. Bldg Grade Floor Slab Details Sheet 2	Design	
2	2	Struct	Rail Serv. & Insp Bldg	4.4.2	Rail Serv. & Insp. Bldg Grade Floor Slab Details Sheet 3	Design	
2	2	Struct	Rail Serv. & Insp Bldg	4.4.2	Rail Serv. & Insp. Bldg Elev. Floor Slab Plan Sheet 1	Design	
2	2	Struct	Rail Serv. & Insp Bldg	4.4.2	Rail Serv. & Insp. Bldg Elev. Floor Slab Plan Sheet 2	Design	
2	2	Struct	Rail Serv. & Insp Bldg	4.4.2	Rail Serv. & Insp. Bldg Roof Framing Plan Sheet 1	Design	
2	2	Struct	Rail Serv. & Insp Bldg	4.4.2	Rail Serv. & Insp. Bldg Roof Framing Plan Sheet 2	Design	
2	2	Struct	Rail Serv. & Insp Bldg	4.4.2	Rail Serv. & Insp. Bldg Roof Framing Plan Sheet 3	Design	
2	2	Struct	Rail Serv. & Insp Bldg	4.4.2	Rail Serv. & Insp. Bldg Elev. Floor Framing Plan Sheet 1	Design	
2	2	Struct	Rail Serv. & Insp Bldg	4.4.2	Rail Serv. & Insp. Bldg Elev. Floor Framing Plan Sheet 2	Design	
2	2	Struct	Rail Serv. & Insp Bldg	4.4.2	Rail Serv. & Insp. Bldg Crane Runway Framing Plan Sheet 1	Design	
2	2	Struct	Rail Serv. & Insp Bldg	4.4.2	Rail Serv. & Insp. Bldg Crane Runway Framing Plan Sheet 2	Design	
2	2	Struct	Rail Serv. & Insp Bldg	4.4.2	Rail Serv. & Insp. Bldg Crane Runway Framing Plan Sheet 3	Design	
2	2	Struct	Rail Serv. & Insp Bldg	4.4.2	Rail Serv. & Insp. Bldg Steel Framing Elevations Sheet 1	Design	
2	2	Struct	Rail Serv. & Insp Bldg	4.4.2	Rail Serv. & Insp. Bldg Steel Framing Elevations Sheet 2	Design	
2	2	Struct	Rail Serv. & Insp Bldg	4.4.2	Rail Serv. & Insp. Bldg Steel Framing Elevations Sheet 3	Design	
2	2	Struct	Rail Serv. & Insp Bldg	4.4.2	Rail Serv. & Insp. Bldg Steel Framing Elevations Sheet 4	Design	
2	2	Struct	Rail Serv. & Insp Bldg	4.4.2	Rail Serv. & Insp. Bldg Steel Framing Elevations Sheet 5	Design	
2	2	Struct	Rail Serv. & Insp Bldg	4.4.2	Rail Serv. & Insp. Bldg Steel Framing Elevations Sheet 6	Design	
2	2	Struct	Rail Serv. & Insp Bldg	4.4.2	Rail Serv. & Insp. Bldg Stairtower Plan, Sect's & Details	Design	
2	2	Struct	Rail Serv. & Insp Bldg	4.4.2	Rail Serv. & Insp. Bldg Steel Framing Details Sheet 1	Design	
2	2	Struct	Rail Serv. & Insp Bldg	4.4.2	Rail Serv. & Insp. Bldg Steel Framing Details Sheet 2	Design	
2	2	Struct	Rail Serv. & Insp Bldg	4.4.2	Rail Serv. & Insp. Bldg Steel Framing Details Sheet 3	Design	
2	2	Struct	Storage Bldg	4.4.2	Storage Building Foundation Plan	Design	5
2	2	Struct	Storage Bldg	4.4.2	Storage Building Foundation Sections & Details	Design	
2	2	Struct	Storage Bldg	4.4.2	Storage Building Roof Framing Plan	Design	
2	2	Struct	Storage Bldg	4.4.2	Storage Building Framing Elevations	Design	
2	2	Struct	Storage Bldg	4.4.2	Storage Building Foundation Details	Design	
2	2	Struct	Other Bldgs	4.4.2	Gate House Foundation & Framing Plans	Design	2
2	2	Struct	Other Bldgs	4.4.2	Gate House Foundation & Framing Sections & Details	Design	
2	2	Struct	Car Wash Bldg	4.4.2	Carwash Foundation Plan	Design	6

LVL 1	LVL 2	Discipline	Dwg Group		Drawing Description	Drawing Type	Drawing Count by Group
WBS				SOW Para	DESCRIPTION		
						Design, Diag. or Standard	SOW No.
					STRUCTURAL		
2	2	Struct	Car Wash Bldg	4.4.2	Carwash Foundation Sections & Details	Design	
2	2	Struct	Car Wash Bldg	4.4.2	Carwash Roof Framing Plan	Design	
2	2	Struct	Car Wash Bldg	4.4.2	Carwash Framing Elevations	Design	
2	2	Struct	Car Wash Bldg	4.4.2	Carwash Framing Details	Design	
2	2	Struct	Car Wash Bldg	4.4.2	Miscellaneous Structures	Design	
2	3	Struct	Dulles Airport Station	4.4.2	MWAA/WMATA Service Area Floor Plan	Design	32
2	3	Struct	Dulles Airport Station	4.4.2	MWAA/WMATA Service Area Roof Plan	Design	
2	3	Struct	Dulles Airport Station	4.4.2	Mezzanine Level Roof Plan Sheet 1	Design	
2	3	Struct	Dulles Airport Station	4.4.2	Mezzanine Level Roof Plan Sheet 2	Design	
2	3	Struct	Dulles Airport Station	4.4.2	Mezzanine Level Roof Plan Sheet 3	Design	
2	3	Struct	Dulles Airport Station	4.4.2	Mezzanine Level Roof Plan Sheet 4	Design	
2	3	Struct	Dulles Airport Station	4.4.2	Tunnel Roof Plan Sheet 1	Design	
2	3	Struct	Dulles Airport Station	4.4.2	Tunnel Roof Plan Sheet 2	Design	
2	3	Struct	Dulles Airport Station	4.4.2	Mezzanine Level Plan Sheet 1	Design	
2	3	Struct	Dulles Airport Station	4.4.2	Mezzanine Level Plan Sheet 2	Design	
2	3	Struct	Dulles Airport Station	4.4.2	Mezzanine Level Plan Sheet 3	Design	
2	3	Struct	Dulles Airport Station	4.4.2	Mezzanine Level Plan Sheet 4	Design	
2	3	Struct	Dulles Airport Station	4.4.2	Platform Level Plan Sheet 1	Design	
2	3	Struct	Dulles Airport Station	4.4.2	Platform Level Plan Sheet 2	Design	
2	3	Struct	Dulles Airport Station	4.4.2	Platform Level Plan Sheet 3	Design	
2	3	Struct	Dulles Airport Station	4.4.2	Platform Level Plan Sheet 4	Design	
2	3	Struct	Dulles Airport Station	4.4.2	Platform Level Plan Sheet 5	Design	
2	3	Struct	Dulles Airport Station	4.4.2	Tunnel Mat Foundation Plan Sheet 1	Design	
2	3	Struct	Dulles Airport Station	4.4.2	Tunnel Mat Foundation Plan Sheet 2	Design	
2	3	Struct	Dulles Airport Station	4.4.2	Tunnel Mat Foundation Plan Sheet 3	Design	
2	3	Struct	Dulles Airport Station	4.4.2	Tunnel Mat Foundation Plan Sheet 4	Design	
2	3	Struct	Dulles Airport Station	4.4.2	Tunnel Mat Foundation Plan Sheet 5	Design	
2	3	Struct	Dulles Airport Station	4.4.2	Station Longitudinal Section Sheet 1	Design	
2	3	Struct	Dulles Airport Station	4.4.2	Station Longitudinal Section Sheet 2	Design	
2	3	Struct	Dulles Airport Station	4.4.2	Station Longitudinal Section Sheet 3	Design	
2	3	Struct	Dulles Airport Station	4.4.2	Station Longitudinal Section Sheet 4	Design	
2	3	Struct	Dulles Airport Station	4.4.2	Station Longitudinal Section Sheet 5	Design	
2	3	Struct	Dulles Airport Station	4.4.2	Station Cross Sections Sheet 1	Design	
2	3	Struct	Dulles Airport Station	4.4.2	Station Cross Sections Sheet 2	Design	
2	3	Struct	Dulles Airport Station	4.4.2	Station Cross Sections Sheet 3	Design	
2	3	Struct	Dulles Airport Station	4.4.2	Station Details Sheet 1	Design	
2	3	Struct	Dulles Airport Station	4.4.2	Station Details Sheet 2	Design	
2	4	Struct	Tie Breaker Station	4.4.2	RTC Foundation Plans & Sections	Design	1
2	4	Struct	Traction Power Substations	4.4.2	TPSS Bldg (160x40) Fdn & Grade Floor Plan, Sections & Details	Design	4
2	4	Struct	Traction Power Substations	4.4.2	TPSS Bldg (160x40) Roof Plan & Details	Design	
2	4	Struct	Traction Power Substations	4.4.2	TPSS Bldg (90x90) Fdn & Grade Floor Plan, Sections & Details	Design	
2	4	Struct	Traction Power Substations	4.4.2	TPSS Bldg (90x90) Roof Plan & Details	Design	
			4.4.2 Total				346
			Grand Total				438

LVL 1	LVL 2	Discipline	Dwg Group		Drawing Description	Drawing Type	Drawing Count by Group
WBS				SOW Para	DESCRIPTION		
						Design, Diag. or Standard	SOW No.
					TRACK		
					Design Drawings - Total		**414**
					4.2.9 Total		**292**
					4.3 Total		**122**
1	1	Track	General Drawings	4.2.9	Index Sheet	Design	3
1	1	Track	General Drawings	4.2.9	Abbreviations, General Notes and Symblos	Design	
1	1	Track	General Drawings	4.2.9	Key Map	Design	
1	1	Track	Track Alignment	4.2.9	Realign Existing Orange Line (474+00 to 485+00)	Design	131
1	1	Track	Track Alignment	4.2.9	Realign Existing Orange Line (485+00 to 496+00)	Design	
1	1	Track	Track Alignment	4.2.9	Realign Existing Orange Line (496+00 to 500+00)	Design	
1	1	Track	Track Alignment	4.2.9	Plan And Profile ML (727+00 to 738+00)	Design	
1	1	Track	Track Alignment	4.2.9	Plan And Profile ML (738+00 to 749+00)	Design	
1	1	Track	Track Alignment	4.2.9	Plan And Profile ML (749+00 to 760+00)	Design	
1	1	Track	Track Alignment	4.2.9	Plan And Profile ML (760+00 to 771+00)	Design	
1	1	Track	Track Alignment	4.2.9	Plan And Profile ML (771+00 to 774+00)	Design	
1	1	Track	Track Alignment	4.2.9	Plan And Profile ML (774+00 to 785+00)	Design	
1	1	Track	Track Alignment	4.2.9	Plan And Profile ML (785+00 to 796+00)	Design	
1	1	Track	Track Alignment	4.2.9	Plan And Profile ML (796+00 to 807+00)	Design	
1	1	Track	Track Alignment	4.2.9	Plan And Profile ML (807+00 to 818+00)	Design	
1	1	Track	Track Alignment	4.2.9	Plan And Profile ML (818+00 to 829+00)	Design	
1	1	Track	Track Alignment	4.2.9	Plan And Profile ML (829+00 to 840+00)	Design	
1	1	Track	Track Alignment	4.2.9	Plan And Profile ML (840+00 to 851+00)	Design	
1	1	Track	Track Alignment	4.2.9	Plan And Profile ML (851+00 to 858+00)	Design	
1	1	Track	Track Alignment	4.2.9	Profile OB (727+00 to 749+00)	Design	
1	1	Track	Track Alignment	4.2.9	Profile OB (749+00 to 771+00)	Design	
1	1	Track	Track Alignment	4.2.9	Profile OB (771+00 to 785+00)	Design	
1	1	Track	Track Alignment	4.2.9	Profile OB (785+00 to 807+00)	Design	
1	1	Track	Track Alignment	4.2.9	Profile OB (807+00 to 829+00)	Design	
1	1	Track	Track Alignment	4.2.9	Profile OB (829+00 to 851+00)	Design	
1	1	Track	Track Alignment	4.2.9	Profile OB (851+00 to 858+00)	Design	
1	1	Track	Track Alignment	4.2.9	Track Alignment Data (Coordinates)	Design	
1	1	Track	Track Alignment	4.2.9	Track Alignment Curve Data	Design	
1	1	Track	Track Alignment	4.2.9	Track Alignment Curve Data	Design	
1	1	Track	Track Alignment	4.2.9	Rail Sections (Great Falls St)	Design	
1	1	Track	Track Alignment	4.2.9	Rail Sections (I-66 Median)	Design	
1	1	Track	Track Alignment	4.2.9	Rail Sections (Haycock Raod)	Design	
1	1	Track	Track Alignment	4.2.9	Rail Sections (DCR)	Design	
1	1	Track	Track Alignment	4.2.9	Rail Sections (Idylwood Road - Route 695)	Design	
1	1	Track	Track Alignment	4.2.9	Rail Sections (Misc Other)	Design	
1	1	Track	Track Alignment	4.2.9	Plan And Profile ML (858+00 to 869+00)	Design	
1	1	Track	Track Alignment	4.2.9	Plan And Profile ML (869+00 to 880+00)	Design	
1	1	Track	Track Alignment	4.2.9	Plan And Profile ML (880+00 to 891+00)	Design	
1	1	Track	Track Alignment	4.2.9	Plan And Profile ML (891+00 to 902+00)	Design	
1	1	Track	Track Alignment	4.2.9	Plan And Profile ML (902+00 to 913+00)	Design	
1	1	Track	Track Alignment	4.2.9	Plan And Profile ML (913+00 to 924+00)	Design	
1	1	Track	Track Alignment	4.2.9	Plan And Profile ML (924+00 to 935+00)	Design	
1	1	Track	Track Alignment	4.2.9	Plan And Profile ML (935+00 to 946+00)	Design	
1	1	Track	Track Alignment	4.2.9	Plan And Profile ML (946+00 to 957+00)	Design	
1	1	Track	Track Alignment	4.2.9	Plan And Profile ML (957+00 to 968+00)	Design	
1	1	Track	Track Alignment	4.2.9	Plan And Profile ML (968+00 to 979+00)	Design	
1	1	Track	Track Alignment	4.2.9	Plan And Profile ML (979+00 to 990+00)	Design	
1	1	Track	Track Alignment	4.2.9	Plan And Profile ML (990+00 to 1001+00)	Design	
1	1	Track	Track Alignment	4.2.9	Plan And Profile ML (1001+00 to 1012+00)	Design	
1	1	Track	Track Alignment	4.2.9	Plan And Profile ML (1012+00 to 1023+00)	Design	
1	1	Track	Track Alignment	4.2.9	Plan And Profile ML (1023+00 to 1034+00)	Design	
1	1	Track	Track Alignment	4.2.9	Plan And Profile ML (1034+00 to 1045+00)	Design	
1	1	Track	Track Alignment	4.2.9	Plan And Profile ML (1045+00 to 1052+00)	Design	
1	1	Track	Track Alignment	4.2.9	Profile OB (858+00 to 880+00)	Design	
1	1	Track	Track Alignment	4.2.9	Profile OB (880+00 to 902+00)	Design	
1	1	Track	Track Alignment	4.2.9	Profile OB (902+00 to 924+00)	Design	
1	1	Track	Track Alignment	4.2.9	Profile OB (924+00 to 946+00)	Design	
1	1	Track	Track Alignment	4.2.9	Profile OB (946+00 to 968+00)	Design	
1	1	Track	Track Alignment	4.2.9	Profile OB (968+00 to 990+00)	Design	
1	1	Track	Track Alignment	4.2.9	Profile OB (990+00 to 1012+00)	Design	
1	1	Track	Track Alignment	4.2.9	Profile OB (1012+00 to 1034+00)	Design	

LVL 1	LVL 2	Discipline	Dwg Group		Drawing Description	Drawing Type	Drawing Count by Group
WBS				SOW Para	DESCRIPTION		
						Design, Diag. or Standard	SOW No.
					TRACK		
1	1	Track	Track Alignment	4.2.9	Profile OB (1034+00 to 1052+00)	Design	
1	1	Track	Track Alignment	4.2.9	Track Alignment Data (Coordinates)	Design	
1	1	Track	Track Alignment	4.2.9	Track Alignment Curve Data	Design	
1	1	Track	Track Alignment	4.2.9	Track Alignment Curve Data	Design	
1	1	Track	Track Alignment	4.2.9	Rail Sections (Tyson's East Sta.)	Design	
1	1	Track	Track Alignment	4.2.9	Rail Sections (Tyson's Cent. Sta.)	Design	
1	1	Track	Track Alignment	4.2.9	Rail Sections (Tunnel)	Design	
1	1	Track	Track Alignment	4.2.9	Rail Sections (Tyson's Central)	Design	
1	1	Track	Track Alignment	4.2.9	Rail Sections (Along Route 7)	Design	
1	1	Track	Track Alignment	4.2.9	Rail Sections (Tyson's West)	Design	
1	1	Track	Track Alignment	4.2.9	Rail Sections (DAAR)	Design	
1	1	Track	Track Alignment	4.2.9	Rail Sections (Misc Other)	Design	
1	1	Track	Track Alignment	4.2.9	Plan And Profile ML (555+00 to 566+00)	Design	
1	1	Track	Track Alignment	4.2.9	Plan And Profile ML (566+00 to 577+00)	Design	
1	1	Track	Track Alignment	4.2.9	Storage Ladder Tracks, 1 and 2 Plan	Design	
1	1	Track	Track Alignment	4.2.9	Storage Ladder Tracks, 1 and 2 Plan	Design	
1	1	Track	Track Alignment	4.2.9	Storage Ladder Tracks, 3 and 4 Plan	Design	
1	1	Track	Track Alignment	4.2.9	Storage Ladder Tracks, 3 and 4 Plan	Design	
1	1	Track	Track Alignment	4.2.9	Storage Ladder Tracks, 1 and 2 Profile	Design	
1	1	Track	Track Alignment	4.2.9	Storage Ladder Tracks, 3 and 4 Profile	Design	
1	1	Track	Track Alignment	4.2.9	Curve Data, Coordinate Sheets	Design	
1	1	Track	Track Alignment	4.2.9	Curve Data, Coordinate Sheets	Design	
1	1	Track	Track Alignment	4.2.9	Critical Cross Sections	Design	
1	1	Track	Track Alignment	4.2.9	Critical Cross Sections	Design	
1	1	Track	Track Alignment	4.2.9	Critical Cross Sections	Design	
1	1	Track	Track Alignment	4.2.9	Plan and Profile ML (1052+00 to 1063+00)	Design	
1	1	Track	Track Alignment	4.2.9	Plan and Profile ML (1063+00 to 1074+00)	Design	
1	1	Track	Track Alignment	4.2.9	Plan and Profile ML (1074+00 to 1085+00)	Design	
1	1	Track	Track Alignment	4.2.9	Plan and Profile ML (1085+00 to 1096+00)	Design	
1	1	Track	Track Alignment	4.2.9	Plan and Profile ML (1096+00 to 1107+00)	Design	
1	1	Track	Track Alignment	4.2.9	Plan and Profile ML (1107+00 to 1118+00)	Design	
1	1	Track	Track Alignment	4.2.9	Plan and Profile ML (1118+00 to 1129+00)	Design	
1	1	Track	Track Alignment	4.2.9	Plan and Profile ML (1129+00 to 1140+00)	Design	
1	1	Track	Track Alignment	4.2.9	Plan and Profile ML (1140+00 to 1151+00)	Design	
1	1	Track	Track Alignment	4.2.9	Plan and Profile ML (1151+00 to 1162+00)	Design	
1	1	Track	Track Alignment	4.2.9	Plan and Profile ML (1162+00 to 1173+00)	Design	
1	1	Track	Track Alignment	4.2.9	Plan and Profile ML (1173+00 to 1184+00)	Design	
1	1	Track	Track Alignment	4.2.9	Plan and Profile ML (1184+00 to 1195+00)	Design	
1	1	Track	Track Alignment	4.2.9	Plan and Profile ML (1195+00 to 1206+00)	Design	
1	1	Track	Track Alignment	4.2.9	Plan and Profile ML (1206+00 to 1217+00)	Design	
1	1	Track	Track Alignment	4.2.9	Plan and Profile ML (1217+00 to 1228+00)	Design	
1	1	Track	Track Alignment	4.2.9	Plan and Profile ML (1228+00 to 1239+00)	Design	
1	1	Track	Track Alignment	4.2.9	Plan and Profile ML (1239+00 to 1250+00)	Design	
1	1	Track	Track Alignment	4.2.9	Plan and Profile ML (1250+00 to 1261+00)	Design	
1	1	Track	Track Alignment	4.2.9	Plan and Profile ML (1261+00 to 1272+00)	Design	
1	1	Track	Track Alignment	4.2.9	Plan and Profile ML (1272+00 to 1283+00)	Design	
1	1	Track	Track Alignment	4.2.9	Plan and Profile ML (1283+00 to 1294+00)	Design	
1	1	Track	Track Alignment	4.2.9	Plan and Profile ML (1294+00 to 1305+00)	Design	
1	1	Track	Track Alignment	4.2.9	Plan and Profile ML (1305+00 to 1316+00)	Design	
1	1	Track	Track Alignment	4.2.9	Plan and Profile ML (1316+00 to 1327+00)	Design	
1	1	Track	Track Alignment	4.2.9	Plan and Profile ML (1327+00 to 1332+00)	Design	
1	1	Track	Track Alignment	4.2.9	Profile OB (1052+00 to 1074+00)	Design	
1	1	Track	Track Alignment	4.2.9	Profile OB (1074+00 to 1096+00)	Design	
1	1	Track	Track Alignment	4.2.9	Profile OB (1096+00 to 1118+00)	Design	
1	1	Track	Track Alignment	4.2.9	Profile OB (1118+00 to 1140+00)	Design	
1	1	Track	Track Alignment	4.2.9	Profile OB (1140+00 to 1162+00)	Design	
1	1	Track	Track Alignment	4.2.9	Profile OB (1162+00 to 1184+00)	Design	
1	1	Track	Track Alignment	4.2.9	Profile OB (1184+00 to 1206+00)	Design	
1	1	Track	Track Alignment	4.2.9	Profile OB (1206+00 to 1228+00)	Design	
1	1	Track	Track Alignment	4.2.9	Profile OB (1228+00 to 1250+00)	Design	
1	1	Track	Track Alignment	4.2.9	Profile OB (1250+00 to 1272+00)	Design	
1	1	Track	Track Alignment	4.2.9	Profile OB (1272+00 to 1294+00)	Design	
1	1	Track	Track Alignment	4.2.9	Profile OB (1294+00 to 1316+00)	Design	
1	1	Track	Track Alignment	4.2.9	Profile OB (1316+00 to 1338+00)	Design	
1	1	Track	Track Alignment	4.2.9	Track Alignment Data (Coordinates)	Design	
1	1	Track	Track Alignment	4.2.9	Track Alignment Curve Data	Design	

LVL 1	LVL 2	Discipline	Dwg Group		Drawing Description	Drawing Type	Drawing Count by Group
WBS				SOW Para	DESCRIPTION		
						Design, Diag. or Standard	SOW No.
					TRACK		
1	1	Track	Track Alignment	4.2.9	Track Alignment Curve Data	Design	
1	1	Track	Track Alignment	4.2.9	Rail Sections (DAAR)	Design	
1	1	Track	Track Alignment	4.2.9	Rail Sections (Trap Road - Route 676)	Design	
1	1	Track	Track Alignment	4.2.9	Rail Sections (Beulah Road - Route 676)	Design	
1	1	Track	Track Alignment	4.2.9	Rail Sections (Wiehle Avenue)	Design	
1	1	Track	Track Alignment	4.2.9	Rail Sections (Wiehle Station)	Design	
1	1	Track	Track Alignment	4.2.9	Rail Sections (Misc Other)	Design	
1	1	Track	Staging Plans	4.2.9	Staging Plan/Orange line trkwk. Sht. 1	Design	4
1	1	Track	Staging Plans	4.2.9	Staging Plan/Orange line trkwk. Sht. 2	Design	
1	1	Track	Staging Plans	4.2.9	Staging Plan/Orange line trkwk. Sht. 3	Design	
1	1	Track	Staging Plans	4.2.9	Staging Plan/Orange line trkwk. Sht. 4	Design	
2	1	Track	General Drawings	4.2.9	Index Sheet	Design	3
2	1	Track	General Drawings	4.2.9	Abbreviations, General Notes and Symblos	Design	
2	1	Track	General Drawings	4.2.9	Key Map	Design	
2	1	Track	Track Alignment	4.2.9	Plan & Profile ML (1332+00 to 1343+00)	Design	151
2	1	Track	Track Alignment	4.2.9	Plan & Profile ML (1343+00 to 1354+00)	Design	
2	1	Track	Track Alignment	4.2.9	Plan & Profile ML (1354+00 to 1365+00)	Design	
2	1	Track	Track Alignment	4.2.9	Plan & Profile ML (1365+00 to 1376+00)	Design	
2	1	Track	Track Alignment	4.2.9	Plan & Profile ML (1376+00 to 1387+00)	Design	
2	1	Track	Track Alignment	4.2.9	Plan & Profile ML (1387+00 to 1398+00)	Design	
2	1	Track	Track Alignment	4.2.9	Plan & Profile ML (1398+00 to 1409+00)	Design	
2	1	Track	Track Alignment	4.2.9	Plan & Profile ML (1409+00 to 1420+00)	Design	
2	1	Track	Track Alignment	4.2.9	Plan & Profile ML (1420+00 to 1431+00)	Design	
2	1	Track	Track Alignment	4.2.9	Plan & Profile ML (1431+00 to 1442+00)	Design	
2	1	Track	Track Alignment	4.2.9	Plan & Profile ML (1442+00 to 1453+00)	Design	
2	1	Track	Track Alignment	4.2.9	Plan & Profile ML (1453+00 to 1464+00)	Design	
2	1	Track	Track Alignment	4.2.9	Plan & Profile ML (1464+00 to 1475+00)	Design	
2	1	Track	Track Alignment	4.2.9	Plan & Profile ML (1475+00 to 1486+00)	Design	
2	1	Track	Track Alignment	4.2.9	Plan & Profile ML (1486+00 to 1497+00)	Design	
2	1	Track	Track Alignment	4.2.9	Plan & Profile ML (1497+00 to 1508+00)	Design	
2	1	Track	Track Alignment	4.2.9	Plan & Profile ML (1508+00 to 1519+00)	Design	
2	1	Track	Track Alignment	4.2.9	Plan & Profile ML (1519+00 to 1530+00)	Design	
2	1	Track	Track Alignment	4.2.9	Plan & Profile ML (1530+00 to 1541+00)	Design	
2	1	Track	Track Alignment	4.2.9	Plan & Profile ML (1541+00 to 1552+00)	Design	
2	1	Track	Track Alignment	4.2.9	Plan & Profile ML (1552+00 to 1563+00)	Design	
2	1	Track	Track Alignment	4.2.9	Plan & Profile ML (1563+00 to 1574+00)	Design	
2	1	Track	Track Alignment	4.2.9	Plan & Profile ML (1574+00 to 1584+00)	Design	
2	1	Track	Track Alignment	4.2.9	Profile OB (1332+00 to 1354+00)	Design	
2	1	Track	Track Alignment	4.2.9	Profile OB (1354+00 to 1376+00)	Design	
2	1	Track	Track Alignment	4.2.9	Profile OB (1376+00 to 1398+00)	Design	
2	1	Track	Track Alignment	4.2.9	Profile OB (1398+00 to 1420+00)	Design	
2	1	Track	Track Alignment	4.2.9	Profile OB (1420+00 to 1442+00)	Design	
2	1	Track	Track Alignment	4.2.9	Profile OB (1442+00 to 1464+00)	Design	
2	1	Track	Track Alignment	4.2.9	Profile OB (1464+00 to 1486+00)	Design	
2	1	Track	Track Alignment	4.2.9	Profile OB (1486+00 to 1508+00)	Design	
2	1	Track	Track Alignment	4.2.9	Profile OB (1508+00 to 1530+00)	Design	
2	1	Track	Track Alignment	4.2.9	Profile OB (1530+00 to 1552+00)	Design	
2	1	Track	Track Alignment	4.2.9	Profile OB (1552+00 to 1574+00)	Design	
2	1	Track	Track Alignment	4.2.9	Profile OB (1574+00 to 1584+00)	Design	
2	1	Track	Track Alignment	4.2.9	Track Alignment Data (Coordinates)	Design	
2	1	Track	Track Alignment	4.2.9	Track Alignment Curve Data	Design	
2	1	Track	Track Alignment	4.2.9	Track Alignment Curve Data	Design	
2	1	Track	Track Alignment	4.2.9	Rail Sections (DAAR)	Design	
2	1	Track	Track Alignment	4.2.9	Rail Sections (Reston Parkway - Route 602)	Design	
2	1	Track	Track Alignment	4.2.9	Rail Sections (Reston Station)	Design	
2	1	Track	Track Alignment	4.2.9	Rail Sections (Fairfax County Pkwy - Route 7100)	Design	
2	1	Track	Track Alignment	4.2.9	Rail Sections (Hern-Monroe Ped Bridge)	Design	
2	1	Track	Track Alignment	4.2.9	Rail Sections (Hern. - Monroe Station)	Design	
2	1	Track	Track Alignment	4.2.9	Rail Sections (Monroe Street - Route 666)	Design	
2	1	Track	Track Alignment	4.2.9	Rail Sections (Route 28 Station)	Design	
2	1	Track	Track Alignment	4.2.9	Rail Sections (Route 28 Ramp B)	Design	
2	1	Track	Track Alignment	4.2.9	Rail Sections (Route 28 Ramp A)	Design	
2	1	Track	Track Alignment	4.2.9	Rail Sections (Route 28)	Design	
2	1	Track	Track Alignment	4.2.9	Rail Sections (Misc Other)	Design	
2	1	Track	Track Alignment	4.2.9	Plan & Profile ML (1584+00 to 1595+00)	Design	
2	1	Track	Track Alignment	4.2.9	Plan & Profile ML (1595+00 to 1606+00)	Design	

LVL 1	LVL 2	Discipline	Dwg Group		Drawing Description	Drawing Type	Drawing Count by Group
WBS				SOW Para	DESCRIPTION		
						Design, Diag. or Standard	SOW No.
					TRACK		
2	1	Track	Track Alignment	4.2.9	Plan & Profile ML (1606+00 to 1617+00)	Design	
2	1	Track	Track Alignment	4.2.9	Plan & Profile ML (1617+00 to 1628+00)	Design	
2	1	Track	Track Alignment	4.2.9	Plan & Profile ML (1628+00 to 1639+00)	Design	
2	1	Track	Track Alignment	4.2.9	Plan & Profile ML (1639+00 to 1650+00)	Design	
2	1	Track	Track Alignment	4.2.9	Plan & Profile ML (1650+00 to 1661+00)	Design	
2	1	Track	Track Alignment	4.2.9	Plan & Profile ML (1661+00 to 1672+00)	Design	
2	1	Track	Track Alignment	4.2.9	Plan & Profile ML (1672+00 to 1683+00)	Design	
2	1	Track	Track Alignment	4.2.9	Plan & Profile ML (1683+00 to 1694+00)	Design	
2	1	Track	Track Alignment	4.2.9	Plan & Profile ML (1694+00 to 1705+00)	Design	
2	1	Track	Track Alignment	4.2.9	Plan & Profile ML (1705+00 to 1716+00)	Design	
2	1	Track	Track Alignment	4.2.9	Plan & Profile ML (1716+00 to 1727+00)	Design	
2	1	Track	Track Alignment	4.2.9	Plan & Profile ML (1727+00 to 1738+00)	Design	
2	1	Track	Track Alignment	4.2.9	Plan & Profile ML (1738+00 to 1749+00)	Design	
2	1	Track	Track Alignment	4.2.9	Plan & Profile ML (1749+00 to 1752+00)	Design	
2	1	Track	Track Alignment	4.2.9	Profile OB (1584+00 to 1606+00)	Design	
2	1	Track	Track Alignment	4.2.9	Profile OB (1606+00 to 1628+00)	Design	
2	1	Track	Track Alignment	4.2.9	Profile OB (1628+00 to 1650+00)	Design	
2	1	Track	Track Alignment	4.2.9	Profile OB (1650+00 to 1672+00)	Design	
2	1	Track	Track Alignment	4.2.9	Profile OB (1672+00 to 1694+00)	Design	
2	1	Track	Track Alignment	4.2.9	Profile OB (1694+00 to 1716+00)	Design	
2	1	Track	Track Alignment	4.2.9	Profile OB (1716+00 to 1736+00)	Design	
2	1	Track	Track Alignment	4.2.9	Profile OB (1736+00 to 1752+00)	Design	
2	1	Track	Track Alignment	4.2.9	Track Alignment Data (Coordinates)	Design	
2	1	Track	Track Alignment	4.2.9	Track Alignment Curve Data	Design	
2	1	Track	Track Alignment	4.2.9	Track Alignment Curve Data	Design	
2	1	Track	Track Alignment	4.2.9	Rail Sections (Cut an Cover)	Design	
2	1	Track	Track Alignment	4.2.9	Rail Sections (Tunnel)	Design	
2	1	Track	Track Alignment	4.2.9	Rail Sections (Airport Station)	Design	
2	1	Track	Track Alignment	4.2.9	Rail Sections (Along Autopilot Drive)	Design	
2	1	Track	Track Alignment	4.2.9	Rail Sections (Misc Other)	Design	
2	1	Track	Track Alignment	4.2.9	Yard Connector Lead Plan (1543+00 to 1554+00)	Design	
2	1	Track	Track Alignment	4.2.9	Yard Connector Lead Plan (1554+00 to 1565+00)	Design	
2	1	Track	Track Alignment	4.2.9	Yard Connector Lead Plan (1565+00 to 1576+00)	Design	
2	1	Track	Track Alignment	4.2.9	Yard Connector Lead Plan (1576+00 to 1580+00)	Design	
2	1	Track	Track Alignment	4.2.9	Yard Connector Lead Plan (15784+00 to 15773+00)	Design	
2	1	Track	Track Alignment	4.2.9	Yard Connector Lead Plan (15773+00 to 15762+00)	Design	
2	1	Track	Track Alignment	4.2.9	Yard Connector Lead Plan (15762+00 to 15751+00)	Design	
2	1	Track	Track Alignment	4.2.9	Yard Connector Lead Plan (15751+00 to 15740+00)	Design	
2	1	Track	Track Alignment	4.2.9	Yard Connector Lead Plan (15740+00 to 15729+00)	Design	
2	1	Track	Track Alignment	4.2.9	Yard Connector Lead Plan (15729+00 to 15718+00)	Design	
2	1	Track	Track Alignment	4.2.9	Yard Connector Lead Plan (15718+00 to 15715.9602)	Design	
2	1	Track	Track Alignment	4.2.9	Yard Storage Track Loop	Design	
2	1	Track	Track Alignment	4.2.9	Yard Storage Track Loop	Design	
2	1	Track	Track Alignment	4.2.9	Storage Ladder Tracks, Plan 1	Design	
2	1	Track	Track Alignment	4.2.9	Storage Ladder Tracks, Plan 2	Design	
2	1	Track	Track Alignment	4.2.9	Storage Ladder Tracks, Plan 3	Design	
2	1	Track	Track Alignment	4.2.9	Storage Ladder Tracks, Plan 4	Design	
2	1	Track	Track Alignment	4.2.9	Storage Ladder Tracks, Plan 5	Design	
2	1	Track	Track Alignment	4.2.9	Storage Ladder Tracks, Plan 6	Design	
2	1	Track	Track Alignment	4.2.9	Yard O and M Tracks, Plan 1	Design	
2	1	Track	Track Alignment	4.2.9	Yard O and M Tracks, Plan 2	Design	
2	1	Track	Track Alignment	4.2.9	Storage Ladder Tracks, Profile 1	Design	
2	1	Track	Track Alignment	4.2.9	Storage Ladder Tracks, Profile 2	Design	
2	1	Track	Track Alignment	4.2.9	Storage Ladder Tracks, Profile 3	Design	
2	1	Track	Track Alignment	4.2.9	Storage Ladder Tracks, Profile 4	Design	
2	1	Track	Track Alignment	4.2.9	Curve Data, Coordinate Sheets	Design	
2	1	Track	Track Alignment	4.2.9	Curve Data, Coordinate Sheets	Design	
2	1	Track	Track Alignment	4.2.9	Curve Data, Coordinate Sheets	Design	
2	1	Track	Track Alignment	4.2.9	Curve Data, Coordinate Sheets	Design	
2	1	Track	Track Alignment	4.2.9	Critical Cross Sections	Design	
2	1	Track	Track Alignment	4.2.9	Critical Cross Sections	Design	
2	1	Track	Track Alignment	4.2.9	Plan & Profile ML (1752+00 to 1763+00)	Design	
2	1	Track	Track Alignment	4.2.9	Plan & Profile ML (1763+00 to 1774+00)	Design	
2	1	Track	Track Alignment	4.2.9	Plan & Profile ML (1774+00 to 1785+00)	Design	
2	1	Track	Track Alignment	4.2.9	Plan & Profile ML (1785+00 to 1796+00)	Design	
2	1	Track	Track Alignment	4.2.9	Plan & Profile ML (1796+00 to 1807+00)	Design	

LVL 1	LVL 2	Discipline	Dwg Group		Drawing Description	Drawing Type	Drawing Count by Group
WBS				SOW Para	DESCRIPTION		
						Design, Diag. or Standard	SOW No.
					TRACK		
2	1	Track	Track Alignment	4.2.9	Plan & Profile ML (1807+00 to 1818+00)	Design	
2	1	Track	Track Alignment	4.2.9	Plan & Profile ML (1818+00 to 1829+00)	Design	
2	1	Track	Track Alignment	4.2.9	Plan & Profile ML (1829+00 to 1840+00)	Design	
2	1	Track	Track Alignment	4.2.9	Plan & Profile ML (1840+00 to 1851+00)	Design	
2	1	Track	Track Alignment	4.2.9	Plan & Profile ML (1851+00 to 1862+00)	Design	
2	1	Track	Track Alignment	4.2.9	Plan & Profile ML (1862+00 to 1873+00)	Design	
2	1	Track	Track Alignment	4.2.9	Plan & Profile ML (1873+00 to 1884+00)	Design	
2	1	Track	Track Alignment	4.2.9	Plan & Profile ML (1884+00 to 1895+00)	Design	
2	1	Track	Track Alignment	4.2.9	Plan & Profile ML (1895+00 to 1906+00)	Design	
2	1	Track	Track Alignment	4.2.9	Plan & Profile ML (1906+00 to 1917+00)	Design	
2	1	Track	Track Alignment	4.2.9	Plan & Profile ML (1917+00 to 1928+00)	Design	
2	1	Track	Track Alignment	4.2.9	Plan & Profile ML (1928+00 to 1939+00)	Design	
2	1	Track	Track Alignment	4.2.9	Plan & Profile ML (1939+00 to 1947+00)	Design	
2	1	Track	Track Alignment	4.2.9	Profile OB (1752+00 to 1774+00)	Design	
2	1	Track	Track Alignment	4.2.9	Profile OB (1774+00 to 1796+00)	Design	
2	1	Track	Track Alignment	4.2.9	Profile OB (1796+00 to 1818+00)	Design	
2	1	Track	Track Alignment	4.2.9	Profile OB (1818+00 to 1840+00)	Design	
2	1	Track	Track Alignment	4.2.9	Profile OB (1840+00 to 1862+00)	Design	
2	1	Track	Track Alignment	4.2.9	Profile OB (1862+00 to 184+00)	Design	
2	1	Track	Track Alignment	4.2.9	Profile OB (1884+00 to 1906+00)	Design	
2	1	Track	Track Alignment	4.2.9	Profile OB (1906+00 to 1928+00)	Design	
2	1	Track	Track Alignment	4.2.9	Profile OB (1928+00 to 1947+00)	Design	
2	1	Track	Track Alignment	4.2.9	Track Alignment Data (Coordinates)	Design	
2	1	Track	Track Alignment	4.2.9	Track Alignment Curve Data	Design	
2	1	Track	Track Alignment	4.2.9	Track Alignment Curve Data	Design	
2	1	Track	Track Alignment	4.2.9	Rail Sections (Old Fox Road - Route 606)	Design	
2	1	Track	Track Alignment	4.2.9	Rail Sections (Route 606 Station)	Design	
2	1	Track	Track Alignment	4.2.9	Rail Sections (Dulles Greenway)	Design	
2	1	Track	Track Alignment	4.2.9	Rail Sections (Route 607)	Design	
2	1	Track	Track Alignment	4.2.9	Rail Sections (Route 772 Station)	Design	
2	1	Track	Track Alignment	4.2.9	Rail Sections (Route 772)	Design	
2	1	Track	Track Alignment	4.2.9	Rail Sections (Route 772 Station)	Design	
2	1	Track	Track Alignment	4.2.9	Rail Sections (Misc. Other)	Design	
		4.2.9 Total					292
1	1	Track	Track Charts	4.3	Index of Drawings - Trackwork	Design	31
1	1	Track	Track Charts	4.3	TW Abbreviations and Symbols	Design	
1	1	Track	Track Charts	4.3	TW General Notes	Design	
1	1	Track	Track Charts	4.3	Track Charts (727 to 749)	Design	
1	1	Track	Track Charts	4.3	Track Charts (749 to 771)	Design	
1	1	Track	Track Charts	4.3	Track Charts (771 to 793)	Design	
1	1	Track	Track Charts	4.3	Track Charts (793 to 815)	Design	
1	1	Track	Track Charts	4.3	Track Charts (815 to 837))	Design	
1	1	Track	Track Charts	4.3	Track Charts (837 to 859)	Design	
1	1	Track	Track Charts	4.3	Track Charts (859 to 881)	Design	
1	1	Track	Track Charts	4.3	Track Charts (881 to 903)	Design	
1	1	Track	Track Charts	4.3	Track Charts (903 to 925)	Design	
1	1	Track	Track Charts	4.3	Track Charts (925 to 947)	Design	
1	1	Track	Track Charts	4.3	Track Charts (947 to 969)	Design	
1	1	Track	Track Charts	4.3	Track Charts (969 to 991)	Design	
1	1	Track	Track Charts	4.3	Track Charts (991 to 1013)	Design	
1	1	Track	Track Charts	4.3	Track Charts (1013 to 1035)	Design	
1	1	Track	Track Charts	4.3	Track Charts (1035 to 1057)	Design	
1	1	Track	Track Charts	4.3	Track Charts (1057 to 1079)	Design	
1	1	Track	Track Charts	4.3	Track Charts (1079 to 1101)	Design	
1	1	Track	Track Charts	4.3	Track Charts (1101 to 1123)	Design	
1	1	Track	Track Charts	4.3	Track Charts (1123 to 1145)	Design	
1	1	Track	Track Charts	4.3	Track Charts (1145 to 1167)	Design	
1	1	Track	Track Charts	4.3	Track Charts (1167 to 1189)	Design	
1	1	Track	Track Charts	4.3	Track Charts (1189 to 1211)	Design	
1	1	Track	Track Charts	4.3	Track Charts (1211 to 1233)	Design	
1	1	Track	Track Charts	4.3	Track Charts (1233 to 1255)	Design	
1	1	Track	Track Charts	4.3	Track Charts (1255 to 1277)	Design	
1	1	Track	Track Charts	4.3	Track Charts (1277 to 1299)	Design	
1	1	Track	Track Charts	4.3	Track Charts (1299 to 1317)	Design	
1	1	Track	Track Charts	4.3	Track Charts (1317 to EOL - Phase 1))	Design	

LVL 1	LVL 2	Discipline	Dwg Group		Drawing Description	Drawing Type	Drawing Count by Group
WBS				SOW Para	DESCRIPTION		
						Design, Diag. or Standard	SOW No.
					TRACK		
1	1	Track	General Drawings	4.3	Review Existing WMATA Design Details (DD's)	Design	24
1	1	Track	General Drawings	4.3	Turnout layout - No. 10 w/Tangential Sw.	Design	
1	1	Track	General Drawings	4.3	Switch layout. Tangential for No. 10 T.O.	Design	
1	1	Track	General Drawings	4.3	Tangential Switch Details, No. 10 T.O.	Design	
1	1	Track	General Drawings	4.3	Turnout layout - No. 15 w/Tangential Sw.	Design	
1	1	Track	General Drawings	4.3	Switch layout, No. 15 Tangential Sw.	Design	
1	1	Track	General Drawings	4.3	Switch details, No. 15 Tangential Sw.	Design	
1	1	Track	General Drawings	4.3	Plated Tangential Sw. for No. 10 T.O. DF	Design	
1	1	Track	General Drawings	4.3	Plate Details for DF Tangential Sw., No. 10 T.O.	Design	
1	1	Track	General Drawings	4.3	Concrete Crossties - Typical, Standard ties	Design	
1	1	Track	General Drawings	4.3	Concrete Crossties - Typical, Special ties	Design	
1	1	Track	General Drawings	4.3	Add'l. Trkwk details, Restraining rails	Design	
1	1	Track	General Drawings	4.3	Emerg. G.R. det. Ballast trk, timber T.	Design	
1	1	Track	General Drawings	4.3	Emerg. G.R. det. Ballast trk, concrete T.	Design	
1	1	Track	General Drawings	4.3	Emerg. G.R. details for Conc. Ties	Design	
1	1	Track	General Drawings	4.3	Transitions - Conc. Ties to Timber Trk/Sw Ties	Design	
1	1	Track	General Drawings	4.3	WF Yard Trackwork - Site specific details	Design	
1	1	Track	General Drawings	4.3	E.O.T. at I.0.S. M.L. Termination, Vic. Sta. 1346	Design	
1	1	Track	General Drawings	4.3	Typical Track Sections, ballasted	Design	
1	1	Track	General Drawings	4.3	Typical Track Sections, ballasted	Design	
1	1	Track	General Drawings	4.3	Typical Track Sections, DF (tunnel/aerial)	Design	
1	1	Track	General Drawings	4.3	Typical DF track installation det.	Design	
1	1	Track	General Drawings	4.3	Typical DF track installation det.	Design	
1	1	Track	General Drawings	4.3	Typical Track Sections - Misc	Design	
1	1	Track	Contact Rail	4.3	Review Existing WMATA Design Details (DD's)	DD Dwgs	3
1	1	Track	Contact Rail	4.3	Site Specific C.R. Layouts, not covered above	DD Dwgs	
1	1	Track	Contact Rail	4.3	Site Specific C.R. Layouts, not covered above	DD Dwgs	
2	1	Track	Track Charts	4.3	Index of Drawings - Trackwork	Design	40
2	1	Track	Track Charts	4.3	TW Abbreviations and Symbols	Design	
2	1	Track	Track Charts	4.3	TW General Notes	Design	
2	1	Track	Track Charts	4.3	Track Charts (1340 to 1362)	Design	
2	1	Track	Track Charts	4.3	Track Charts (1362 to 1384)	Design	
2	1	Track	Track Charts	4.3	Track Charts (1384 to 1406)	Design	
2	1	Track	Track Charts	4.3	Track Charts (1406 to 1428)	Design	
2	1	Track	Track Charts	4.3	Track Charts (1428 to 1450)	Design	
2	1	Track	Track Charts	4.3	Track Charts (1450 to 1472)	Design	
2	1	Track	Track Charts	4.3	Track Charts (1472 to 1494)	Design	
2	1	Track	Track Charts	4.3	Track Charts (1494 to 1516)	Design	
2	1	Track	Track Charts	4.3	Track Charts (1516 to 1538)	Design	
2	1	Track	Track Charts	4.3	Track Charts (1538 to 1560)	Design	
2	1	Track	Track Charts	4.3	Track Charts (1560 to 1582)	Design	
2	1	Track	Track Charts	4.3	Track Charts (1582 to 1604)	Design	
2	1	Track	Track Charts	4.3	Track Charts (1604 to 1626)	Design	
2	1	Track	Track Charts	4.3	Track Charts (1626 to 1648)	Design	
2	1	Track	Track Charts	4.3	Track Charts (1648 to 1670)	Design	
2	1	Track	Track Charts	4.3	Track Charts (1670 to 1692)	Design	
2	1	Track	Track Charts	4.3	Track Charts (1692 to 1714)	Design	
2	1	Track	Track Charts	4.3	Track Charts (1714 to 1736)	Design	
2	1	Track	Track Charts	4.3	Track Charts (1736 to 1758)	Design	
2	1	Track	Track Charts	4.3	Track Charts (1758 to 1780)	Design	
2	1	Track	Track Charts	4.3	Track Charts (1780 to 1802)	Design	
2	1	Track	Track Charts	4.3	Track Charts (1802 to 1824)	Design	
2	1	Track	Track Charts	4.3	Track Charts (1824 to 1846)	Design	
2	1	Track	Track Charts	4.3	Track Charts (1846 to 1868)	Design	
2	1	Track	Track Charts	4.3	Track Charts (1868 to 1890)	Design	
2	1	Track	Track Charts	4.3	Track Charts (1780 to 1802)	Design	
2	1	Track	Track Charts	4.3	Track Charts (1802 to 1824)	Design	
2	1	Track	Track Charts	4.3	Track Charts (1824 to 1846)	Design	
2	1	Track	Track Charts	4.3	Track Charts (1846 to 1868)	Design	
2	1	Track	Track Charts	4.3	Track Charts (1868 to 1890)	Design	
2	1	Track	Track Charts	4.3	Track Charts (1890 to 1912)	Design	
2	1	Track	Track Charts	4.3	Track Charts (1912 to 1934)	Design	
2	1	Track	Track Charts	4.3	Track Charts (1934 to EOL)	Design	
2	1	Track	Track Charts	4.3	Track Charts - Yard 15 Lead	Design	
2	1	Track	Track Charts	4.3	Track Charts - Yard 15 Lead	Design	
2	1	Track	Track Charts	4.3	Track Charts - Yard 15 Lead	Design	

LVL 1	LVL 2	Discipline	Dwg Group		Drawing Description	Drawing Type	Drawing Count by Group
WBS				SOW Para	DESCRIPTION		
						Design, Diag. or Standard	SOW No.
					TRACK		
2	1	Track	Track Charts	4.3	Track Charts - Yard 15 Lead	Design	
2	1	Track	General Drawings	4.3	Review Existing WMATA Design Details (DD's)	DD Dwgs	12
2	1	Track	General Drawings	4.3	DBl. X.O. Wide T.C. - Ballasted	DD Dwgs	
2	1	Track	General Drawings	4.3	DBl. X.O. 14' T.C. - Ballasted	DD Dwgs	
2	1	Track	General Drawings	4.3	DBl. X.O. Ctr. Xing Frog ballast	DD Dwgs	
2	1	Track	General Drawings	4.3	DBl. X.O. Ctl. Xing ballast plates and details	DD Dwgs	
2	1	Track	General Drawings	4.3	DBl. X.O. Ctl. Xing DF plates and details	DD Dwgs	
2	1	Track	General Drawings	4.3	Rest.GR layout and details - Concrete ties	DD Dwgs	
2	1	Track	General Drawings	4.3	E.O.T. at Phase 2. M.L. Termination, Sta. 1948	DD Dwgs	
2	1	Track	General Drawings	4.3	Typical Track Sections, ballasted/DF Aerial	DD Dwgs	
2	1	Track	General Drawings	4.3	Typical Track Sections, ballasted/DF Aerial	DD Dwgs	
2	1	Track	General Drawings	4.3	Typical Track Sections, DF (tunnel - Line)	DD Dwgs	
2	1	Track	General Drawings	4.3	Typical Track Sections, DF (tunnel - Special TW)	DD Dwgs	
2	1	Track	Yard and Shops	4.3	Dbl. X.O. 22' TC ballasted - layout	Design	9
2	1	Track	Yard and Shops	4.3	Dbl. X.O. 22' TC ballasted - Ctrl. Xing frog	Design	
2	1	Track	Yard and Shops	4.3	Dbl. X.O. Ctr. Xing - frog and plate details	Design	
2	1	Track	Yard and Shops	4.3	Typical Sections Yard/Shop	Design	
2	1	Track	Yard and Shops	4.3	Typical Sections Lead Tracks	Design	
2	1	Track	Yard and Shops	4.3	Typical Sections - Inspection Shop and Carwash	Design	
2	1	Track	Yard and Shops	4.3	Layout drwg. Trackwork Storage Yard	Design	
2	1	Track	Yard and Shops	4.3	Layout drwg. Trackwork Inspection Shop	Design	
2	1	Track	Yard and Shops	4.3	Misc Other TW Drg.	Design	
2	1	Track	Contact Rail	4.3	Review Existing WMATA Design Details (DD's)	Design	3
2	1	Track	Contact Rail	4.3	Site Specific C.R. Layouts, not covered above	Design	
2	1	Track	Contact Rail	4.3	Site Specific C.R. Layouts, not covered above	Design	
				4.3 Total			**122**
				Grand Total			**414**

LVL 1	LVL 2	Discipline	Dwg Group		Drawing Description	Drawing Type	Drawing Count by Group
WBS				SOW Para	DESCRIPTION		
						Design, Diag. or Standard	SOW No.
					TRACTION POWER		
					Design Drawings - Total		**280**
					4.8.1 Total		**280**
1	4	Tract Pwr	General Drawings	4.8.1	Index of Drawings- Sheet 1 of 2	Design	6
1	4	Tract Pwr	General Drawings	4.8.1	Index of Drawings- Sheet 2 of 2	Design	
1	4	Tract Pwr	General Drawings	4.8.1	Overall Power Flow Diagram Sht 1	Design	
1	4	Tract Pwr	General Drawings	4.8.1	Overall Power Flow Diagram Sht 2	Design	
1	4	Tract Pwr	General Drawings	4.8.1	Traction Power Gen Notes & legend	Design	
1	4	Tract Pwr	General Drawings	4.8.1	Traction Power General Notes and Legend	Design	
1	4	Tract Pwr	Power Distribution	4.8.1	One Line HV Distribution Drawing Sht. 1	Design	87
1	4	Tract Pwr	Power Distribution	4.8.1	One Line HV Distribution Drawing Sht. 2	Design	
1	4	Tract Pwr	Power Distribution	4.8.1	One Line HV Distribution Drawing Sht. 3	Design	
1	4	Tract Pwr	Power Distribution	4.8.1	Typical TPSS AC Main Breakers Control Schematic	Design	
1	4	Tract Pwr	Power Distribution	4.8.1	Typical TPSS AC Tie Breaker Control Schematic	Design	
1	4	Tract Pwr	Power Distribution	4.8.1	Typical TPSS Transformer/Rectifier Control Schematic	Design	
1	4	Tract Pwr	Power Distribution	4.8.1	Typical TPSS DC Main Breakers Control Schematic	Design	
1	4	Tract Pwr	Power Distribution	4.8.1	Typical DC Feeder Breaker Control Schematic	Design	
1	4	Tract Pwr	Power Distribution	4.8.1	Typical Tie Breaker Station DC Control Schematic Sht 1	Design	
1	4	Tract Pwr	Power Distribution	4.8.1	Typical UPS & Emergency Power Distribution (TPSS)	Design	
1	4	Tract Pwr	Power Distribution	4.8.1	Typical UPS & Emergency Power Distribution (TBS)	Design	
1	4	Tract Pwr	Power Distribution	4.8.1	Typical LV DC One line (incl. Battery) at TPSS	Design	
1	4	Tract Pwr	Power Distribution	4.8.1	Typical LV DC One line (incl. Battery) at TBS	Design	
1	4	Tract Pwr	Power Distribution	4.8.1	34.5 KV Distribution Dwg.	Design	
1	4	Tract Pwr	Power Distribution	4.8.1	34.5 KV Distribution Dwg.	Design	
1	4	Tract Pwr	Power Distribution	4.8.1	34.5 KV Distribution Dwg.	Design	
1	4	Tract Pwr	Power Distribution	4.8.1	Emergency Trip Switch- Elem. Diag Sht 1	Design	
1	4	Tract Pwr	Power Distribution	4.8.1	Emergency Trip Switch- Elem. Diag Sht 2	Design	
1	4	Tract Pwr	Power Distribution	4.8.1	Emergency Trip Switch- Elem. Diag Sht 3	Design	
1	4	Tract Pwr	Power Distribution	4.8.1	ETS Wiring Interface Detail -Sht 1	Design	
1	4	Tract Pwr	Power Distribution	4.8.1	ETS Typical Mounting Detail	Design	
1	4	Tract Pwr	Power Distribution	4.8.1	ETS Typical Elevation & Section	Design	
1	4	Tract Pwr	Power Distribution	4.8.1	Emergency Trip Station Layout Sht 1	Design	
1	4	Tract Pwr	Power Distribution	4.8.1	Emergency Trip Station Layout Sht 2	Design	
1	4	Tract Pwr	Power Distribution	4.8.1	Emergency Trip Station Layout Sht 3	Design	
1	4	Tract Pwr	Power Distribution	4.8.1	Emergency Trip Station Layout Sht 4	Design	
1	4	Tract Pwr	Power Distribution	4.8.1	Emergency Trip Station Layout Sht 5	Design	
1	4	Tract Pwr	Power Distribution	4.8.1	Emergency Trip Station Layout Sht 6	Design	
1	4	Tract Pwr	Power Distribution	4.8.1	Typical TPSS Interface Cabinets (DTS)	Design	
1	4	Tract Pwr	Power Distribution	4.8.1	Typical TPSS Interface to SCADA	Design	
1	4	Tract Pwr	Power Distribution	4.8.1	Typical TPSS /Utility Interface- 13.8 KV	Design	
1	4	Tract Pwr	Power Distribution	4.8.1	Typical TPSS/Utility Interface- 34.5 KV	Design	
1	4	Tract Pwr	Power Distribution	4.8.1	Typical Ground Grid for TPSS	Design	
1	4	Tract Pwr	Power Distribution	4.8.1	Typical Grounding Details-Sht 1	Design	
1	4	Tract Pwr	Power Distribution	4.8.1	Typical Grounding Details-Sht 2	Design	
1	4	Tract Pwr	Power Distribution	4.8.1	Contact rail Gap Detail	Design	
1	4	Tract Pwr	Power Distribution	4.8.1	Systemwide Contact Rail Layout Plan Sht 1	Design	
1	4	Tract Pwr	Power Distribution	4.8.1	Systemwide Contact Rail Layout Plan Sht 2	Design	
1	4	Tract Pwr	Power Distribution	4.8.1	Systemwide Contact Rail Layout Plan Sht 3	Design	
1	4	Tract Pwr	Power Distribution	4.8.1	Systemwide Contact Rail Layout Plan Sht 4	Design	
1	4	Tract Pwr	Power Distribution	4.8.1	Systemwide Contact Rail Layout Plan Sht 5	Design	
1	4	Tract Pwr	Power Distribution	4.8.1	Systemwide Contact Rail Layout Plan Sht 6	Design	
1	4	Tract Pwr	Power Distribution	4.8.1	Systemwide Contact Rail Layout Plan Sht 7	Design	
1	4	Tract Pwr	Power Distribution	4.8.1	Systemwide Contact Rail Layout Plan Sht 8	Design	
1	4	Tract Pwr	Power Distribution	4.8.1	DC Distribution from TPSS to ROW Sht 1	Design	
1	4	Tract Pwr	Power Distribution	4.8.1	DC Distribution from TBS to ROW Sht 1	Design	
1	4	Tract Pwr	Power Distribution	4.8.1	Typical Power Feeds to Passenger Station	Design	
1	4	Tract Pwr	Power Distribution	4.8.1	Typical Power Feeds to Train Control & Communications Rooms	Design	
1	4	Tract Pwr	Power Distribution	4.8.1	Typical Power Feeds to Wayside Signals & Other Services	Design	
1	4	Tract Pwr	Power Distribution	4.8.1	Typical DC Power (Normal/Emergency)	Design	
1	4	Tract Pwr	Power Distribution	4.8.1	Typical Duct Interface	Design	
1	4	Tract Pwr	Power Distribution	4.8.1	Typical Bonding for Utilities & Structure	Design	
1	4	Tract Pwr	Power Distribution	4.8.1	Bonding for Utilities/Structure Details Sht 1	Design	
1	4	Tract Pwr	Power Distribution	4.8.1	Cathodic Protection Sht 1	Design	
1	4	Tract Pwr	Power Distribution	4.8.1	Cathodic Protection Sht 2	Design	
1	4	Tract Pwr	Power Distribution	4.8.1	Cathodic Protection Sht 3	Design	
1	4	Tract Pwr	Power Distribution	4.8.1	Cathodic Protection Sht 4	Design	
1	4	Tract Pwr	Power Distribution	4.8.1	Cathodic Protection Sht 5	Design	
1	4	Tract Pwr	Power Distribution	4.8.1	Cathodic Protection Sht 6	Design	
1	4	Tract Pwr	Power Distribution	4.8.1	Typical Stray Current Control	Design	
1	4	Tract Pwr	Power Distribution	4.8.1	Contact Rail Heating General Notes	Design	
1	4	Tract Pwr	Power Distribution	4.8.1	Contact Rail Heating Sym. & Abbrev.	Design	
1	4	Tract Pwr	Power Distribution	4.8.1	Contact Rail Heating Typ. Details-SH1	Design	
1	4	Tract Pwr	Power Distribution	4.8.1	Contact Rail Heating Typ. Details-SH2	Design	
1	4	Tract Pwr	Power Distribution	4.8.1	Contact Rail Heater Schedule	Design	
1	4	Tract Pwr	Power Distribution	4.8.1	Contact Rail Heating Plan-SH1	Design	

LVL 1	LVL 2	Discipline	Dwg Group		Drawing Description	Drawing Type	Drawing Count by Group
WBS				SOW Para	DESCRIPTION		
						Design, Diag. or Standard	SOW No.
					TRACTION POWER		
1	4	Tract Pwr	Power Distribution	4.8.1	Contact Rail Heating Plan-SH2	Design	
1	4	Tract Pwr	Power Distribution	4.8.1	Contact Rail Heating Plan-SH3	Design	
1	4	Tract Pwr	Power Distribution	4.8.1	Contact Rail Heating Plan-SH4	Design	
1	4	Tract Pwr	Power Distribution	4.8.1	Contact Rail Heating Plan-SH5	Design	
1	4	Tract Pwr	Power Distribution	4.8.1	Contact Rail Heating Plan-SH6	Design	
1	4	Tract Pwr	Power Distribution	4.8.1	Trackside Heater Control Panel Mounting Details	Design	
1	4	Tract Pwr	Power Distribution	4.8.1	Zone & Trackside Heater Control Panel Schem.	Design	
1	4	Tract Pwr	Power Distribution	4.8.1	Zone & Trackside Heater Control Panel Layout	Design	
1	4	Tract Pwr	Power Distribution	4.8.1	Zone Control Panel Wiring Diag. Sht. 1	Design	
1	4	Tract Pwr	Power Distribution	4.8.1	Zone Control Panel Wiring Riser Diag.	Design	
1	4	Tract Pwr	Power Distribution	4.8.1	Zone Control Panel Enclosure Details Sht. 1 [one sht for each Design Dwg DD TP SSI 19 & 20]	DD Dwg	
1	4	Tract Pwr	Power Distribution	4.8.1	Zone Control Panel Enclosure Details Sht. 2	Design	
1	4	Tract Pwr	Power Distribution	4.8.1	Master Control Panel Schematic [DD-TP-SSI-031]	Design	
1	4	Tract Pwr	Power Distribution	4.8.1	Trackside Heater Power Schematic	Design	
1	4	Tract Pwr	Power Distribution	4.8.1	Trackside Heater Cont. Pnl. Enclosure	Design	
1	4	Tract Pwr	Power Distribution	4.8.1	Systemwide Schematic for Impedance & Cross Bonds Sht 1	Design	
1	4	Tract Pwr	Power Distribution	4.8.1	Typical Details for Impedance & Cross Bonds Sht 1	Design	
1	4	Tract Pwr	Power Distribution	4.8.1	Negative Return Cable Connections Details at Impedance Bonds Sht 1	Design	
1	4	Tract Pwr	Power Distribution	4.8.1	OCC Power Supervisory MTUs Sht 1	Design	
1	4	Tract Pwr	Power Distribution	4.8.1	OCC Interface Terminal Cabinets Sht 1	Design	
1	4	Tract Pwr	Power Distribution	4.8.1	OCC Interface Schematics Sht 1	Design	
1	4	Tract Pwr	Existing TPSS (Fisher Street) @ 725+	4.8.1	Modification of Breaker Controls	Design	7
1	4	Tract Pwr	Existing TPSS (Fisher Street) @ 725+	4.8.1	Modification to the ETS Circuits	Design	
1	4	Tract Pwr	Existing TPSS (Fisher Street) @ 725+	4.8.1	Modifications to Cable/ Conduits Plan	Design	
1	4	Tract Pwr	Existing TPSS (Fisher Street) @ 725+	4.8.1	Modifications to Cable/ Conduits Schedule	Design	
1	4	Tract Pwr	Existing TPSS (Fisher Street) @ 725+	4.8.1	Interface to Systemwide Duct Sht 1	Design	
1	4	Tract Pwr	Existing TPSS (Fisher Street) @ 725+	4.8.1	Interface to Systemwide Duct Sht 2	Design	
1	4	Tract Pwr	Existing TPSS (Fisher Street) @ 725+	4.8.1	Sequence of Work	Design	
1	4	Tract Pwr	TPSS #1 @ WFC Yard (Packaged SS)	4.8.1	One Line Diagram	Design	16
1	4	Tract Pwr	TPSS #1 @ WFC Yard (Packaged SS)	4.8.1	Elem. Diagm AC Bkr/ Rect. Cont. Sht 1	Design	
1	4	Tract Pwr	TPSS #1 @ WFC Yard (Packaged SS)	4.8.1	Elem Diagm DC Bkr Control Sht 1	Design	
1	4	Tract Pwr	TPSS #1 @ WFC Yard (Packaged SS)	4.8.1	Annunciator Panel Details	Design	
1	4	Tract Pwr	TPSS #1 @ WFC Yard (Packaged SS)	4.8.1	AEMS interfacing Cab. & RTU Conn	Design	
1	4	Tract Pwr	TPSS #1 @ WFC Yard (Packaged SS)	4.8.1	Supervisory Controls Cab & DTS Conn	Design	
1	4	Tract Pwr	TPSS #1 @ WFC Yard (Packaged SS)	4.8.1	Cable Schedule Sht 1	Design	
1	4	Tract Pwr	TPSS #1 @ WFC Yard (Packaged SS)	4.8.1	Equipment Interconnection Diagrams Sht. 1	Design	
1	4	Tract Pwr	TPSS #1 @ WFC Yard (Packaged SS)	4.8.1	DC Cable Layout Sh. 1	Design	
1	4	Tract Pwr	TPSS #1 @ WFC Yard (Packaged SS)	4.8.1	Interface to Systemwide Duct Sht 1	Design	
1	4	Tract Pwr	TPSS #1 @ WFC Yard (Packaged SS)	4.8.1	Floor Plan & Equipment Layout	Design	
1	4	Tract Pwr	TPSS #1 @ WFC Yard (Packaged SS)	4.8.1	Stray Current Protection (Negative Drainage)	Design	
1	4	Tract Pwr	TPSS #1 @ WFC Yard (Packaged SS)	4.8.1	Grounding Plan	Design	
1	4	Tract Pwr	TPSS #1 @ WFC Yard (Packaged SS)	4.8.1	WFC Yard Additions/Changes-SH1	Design	
1	4	Tract Pwr	TPSS #1 @ WFC Yard (Packaged SS)	4.8.1	WFC Yard Additions/Changes-SH2	Design	
1	4	Tract Pwr	TPSS #1 @ WFC Yard (Packaged SS)	4.8.1	WFC Yard Sequence of Work	Design	
1	4	Tract Pwr	TBS ML Yard Entry 778+	4.8.1	One Line Diagram	Design	12
1	4	Tract Pwr	TBS ML Yard Entry 778+	4.8.1	Elem Diagm- DC Bkr Control	Design	
1	4	Tract Pwr	TBS ML Yard Entry 778+	4.8.1	Annunciator Panel Details	Design	
1	4	Tract Pwr	TBS ML Yard Entry 778+	4.8.1	RTU Connection Diagram	Design	
1	4	Tract Pwr	TBS ML Yard Entry 778+	4.8.1	DTS Connection Diagram	Design	
1	4	Tract Pwr	TBS ML Yard Entry 778+	4.8.1	Negative Connections	Design	
1	4	Tract Pwr	TBS ML Yard Entry 778+	4.8.1	Cable Schedule Sht 1	Design	
1	4	Tract Pwr	TBS ML Yard Entry 778+	4.8.1	Equipment Interconnection Diagrams Sht. 1	Design	
1	4	Tract Pwr	TBS ML Yard Entry 778+	4.8.1	DC Cable Layout	Design	
1	4	Tract Pwr	TBS ML Yard Entry 778+	4.8.1	Interface to Systemwide Duct Sht 1	Design	
1	4	Tract Pwr	TBS ML Yard Entry 778+	4.8.1	Floor Plan & Equipment Layout	Design	
1	4	Tract Pwr	TBS ML Yard Entry 778+	4.8.1	Grounding Plan	Design	
1	4	Tract Pwr	1-TBS 2-1X @ 807+ (Narrow Rect)	4.8.1	One Line Diagram	Design	1
1	4	Tract Pwr	TPSS #2 @ 836+ (Narrow Rect)	4.8.1	One Line Diagram	Design	13
1	4	Tract Pwr	TPSS #2 @ 836+ (Narrow Rect)	4.8.1	Elem. Diagm AC Bkr/ Rect. Cont. Sht 1	Design	
1	4	Tract Pwr	TPSS #2 @ 836+ (Narrow Rect)	4.8.1	Elem Diagm DC Bkr Control Sht 1	Design	
1	4	Tract Pwr	TPSS #2 @ 836+ (Narrow Rect)	4.8.1	Annunciator Panel Details	Design	
1	4	Tract Pwr	TPSS #2 @ 836+ (Narrow Rect)	4.8.1	AEMS interfacing Cab. & RTU Conn	Design	
1	4	Tract Pwr	TPSS #2 @ 836+ (Narrow Rect)	4.8.1	Supervisory Controls Cab & DTS Conn	Design	
1	4	Tract Pwr	TPSS #2 @ 836+ (Narrow Rect)	4.8.1	Cable Schedule Sht 1	Design	
1	4	Tract Pwr	TPSS #2 @ 836+ (Narrow Rect)	4.8.1	Equipment Interconnection Diagrams Sht. 1	Design	
1	4	Tract Pwr	TPSS #2 @ 836+ (Narrow Rect)	4.8.1	DC Cable Layout Sh. 1	Design	
1	4	Tract Pwr	TPSS #2 @ 836+ (Narrow Rect)	4.8.1	Interface to Systemwide Duct Sht 1	Design	
1	4	Tract Pwr	TPSS #2 @ 836+ (Narrow Rect)	4.8.1	Floor Plan & Equipment Layout	Design	
1	4	Tract Pwr	TPSS #2 @ 836+ (Narrow Rect)	4.8.1	Stray Current Protection (Negative Drainage)	Design	
1	4	Tract Pwr	TPSS #2 @ 836+ (Narrow Rect)	4.8.1	Grounding Plan	Design	
1	4	Tract Pwr	TPSS #3 @ Tysons East Station	4.8.1	One Line Diagram	Design	14
1	4	Tract Pwr	TPSS #3 @ Tysons East Station	4.8.1	Elem. Diagm AC Bkr/ Rect. Cont. Sht 1	Design	
1	4	Tract Pwr	TPSS #3 @ Tysons East Station	4.8.1	Elem Diagm DC Bkr Control Sht 1	Design	

LVL 1	LVL 2	Discipline	Dwg Group		Drawing Description	Drawing Type	Drawing Count by Group
WBS				SOW Para	DESCRIPTION		
						Design, Diag. or Standard	SOW No.
					TRACTION POWER		
1	4	Tract Pwr	TPSS #3 @ Tysons East Station	4.8.1	Annunciator Panel Details	Design	
1	4	Tract Pwr	TPSS #3 @ Tysons East Station	4.8.1	AEMS interfacing Cab. & RTU Conn	Design	
1	4	Tract Pwr	TPSS #3 @ Tysons East Station	4.8.1	Supervisory Controls Cab & DTS Conn	Design	
1	4	Tract Pwr	TPSS #3 @ Tysons East Station	4.8.1	Cable Schedule Sht 1	Design	
1	4	Tract Pwr	TPSS #3 @ Tysons East Station	4.8.1	Equipment Interconnection Diagrams Sht. 1	Design	
1	4	Tract Pwr	TPSS #3 @ Tysons East Station	4.8.1	DC Cable Layout Sh. 1	Design	
1	4	Tract Pwr	TPSS #3 @ Tysons East Station	4.8.1	DC Cable Layout Sh. 2	Design	
1	4	Tract Pwr	TPSS #3 @ Tysons East Station	4.8.1	Interface to Systemwide Duct Sht 1	Design	
1	4	Tract Pwr	TPSS #3 @ Tysons East Station	4.8.1	Floor Plan & Equipment Layout	Design	
1	4	Tract Pwr	TPSS #3 @ Tysons East Station	4.8.1	Stray Current Protection (Negative Drainage)	Design	
1	4	Tract Pwr	TPSS #3 @ Tysons East Station	4.8.1	Grounding Plan	Design	
1	4	Tract Pwr	1-TBS Tyson East Station 895+00	4.8.1	One Line Diagram	Design	12
1	4	Tract Pwr	1-TBS Tyson East Station 895+00	4.8.1	Elem Diagm- DC Bkr Control	Design	
1	4	Tract Pwr	1-TBS Tyson East Station 895+00	4.8.1	Annunciator Panel Details	Design	
1	4	Tract Pwr	1-TBS Tyson East Station 895+00	4.8.1	RTU Connection Diagram	Design	
1	4	Tract Pwr	1-TBS Tyson East Station 895+00	4.8.1	DTS Connection Diagram	Design	
1	4	Tract Pwr	1-TBS Tyson East Station 895+00	4.8.1	Negative Connections	Design	
1	4	Tract Pwr	1-TBS Tyson East Station 895+00	4.8.1	Cable Schedule Sht 1	Design	
1	4	Tract Pwr	1-TBS Tyson East Station 895+00	4.8.1	Equipment Interconnection Diagrams Sht. 1	Design	
1	4	Tract Pwr	1-TBS Tyson East Station 895+00	4.8.1	DC Cable Layout	Design	
1	4	Tract Pwr	1-TBS Tyson East Station 895+00	4.8.1	Interface to Systemwide Duct Sht 1	Design	
1	4	Tract Pwr	1-TBS Tyson East Station 895+00	4.8.1	Floor Plan & Equipment Layout	Design	
1	4	Tract Pwr	1-TBS Tyson East Station 895+00	4.8.1	Grounding Plan	Design	
1	4	Tract Pwr	TPSS #4 @ Tysons Central Station	4.8.1	One Line Diagram	Design	1
1	4	Tract Pwr	TPSS#5 Tysons Central C Station (BG)	4.8.1	One Line Diagram	Design	17
1	4	Tract Pwr	TPSS#5 Tysons Central C Station (BG)	4.8.1	Elem. Diagm AC Bkr/ Rect. Cont. Sht 1	Design	
1	4	Tract Pwr	TPSS#5 Tysons Central C Station (BG)	4.8.1	Elem Diagm DC Bkr Control Sht 1	Design	
1	4	Tract Pwr	TPSS#5 Tysons Central C Station (BG)	4.8.1	Annunciator Panel Details	Design	
1	4	Tract Pwr	TPSS#5 Tysons Central C Station (BG)	4.8.1	AEMS interfacing Cab. & RTU Conn	Design	
1	4	Tract Pwr	TPSS#5 Tysons Central C Station (BG)	4.8.1	Supervisory Controls Cab & DTS Conn	Design	
1	4	Tract Pwr	TPSS#5 Tysons Central C Station (BG)	4.8.1	Cable Schedule Sht 1	Design	
1	4	Tract Pwr	TPSS#5 Tysons Central C Station (BG)	4.8.1	Equipment Interconnection Diagrams Sht. 1	Design	
1	4	Tract Pwr	TPSS#5 Tysons Central C Station (BG)	4.8.1	DC Cable Layout Sh. 1	Design	
1	4	Tract Pwr	TPSS#5 Tysons Central C Station (BG)	4.8.1	DC Cable Layout Sh. 2	Design	
1	4	Tract Pwr	TPSS#5 Tysons Central C Station (BG)	4.8.1	Interface to Systemwide Duct Sht 1	Design	
1	4	Tract Pwr	TPSS#5 Tysons Central C Station (BG)	4.8.1	Floor Plan & Equipment Layout	Design	
1	4	Tract Pwr	TPSS#5 Tysons Central C Station (BG)	4.8.1	Stray Current Protection (Negative Drainage)	Design	
1	4	Tract Pwr	TPSS#5 Tysons Central C Station (BG)	4.8.1	Grounding Plan	Design	
1	4	Tract Pwr	TPSS#5 Tysons Central C Station (BG)	4.8.1	Tunnel Ventilation Control Sht 1	Design	
1	4	Tract Pwr	TPSS#5 Tysons Central C Station (BG)	4.8.1	Tunnel Ventilation Control Sht 2	Design	
1	4	Tract Pwr	TPSS#5 Tysons Central C Station (BG)	4.8.1	Tunnel Ventilation Control Sht 3	Design	
1	4	Tract Pwr	Tyson West TBS @ 1010	4.8.1	One Line Diagram	Design	1
1	4	Tract Pwr	TPSS #6 Pocket Track 1024+	4.8.1	One Line Diagram	Design	1
1	4	Tract Pwr	TPSS # 7 @ Tysons West Or @ 1092 +	4.8.1	One Line Diagram	Design	1
1	4	Tract Pwr	TPSS #8 2-1X @ 1134	4.8.1	One Line Diagram	Design	1
1	4	Tract Pwr	TPSS #9 @ 1213 +	4.8.1	One Line Diagram	Design	1
1	4	Tract Pwr	TPSS #10 2-1X @ 1250+	4.8.1	One Line Diagram	Design	1
1	4	Tract Pwr	TPSS #11 - Wiehle Ave Station	4.8.1	One Line Diagram	Design	1
1	4	Tract Pwr	2-TBS Pocket Track @ 1328	4.8.1	One Line Diagram	Design	1
2	4	Tract Pwr	General Drawings	4.8.1	Index of Drawings- Sheet 1 of 2	Design	44
2	4	Tract Pwr	General Drawings	4.8.1	Index of Drawings- Sheet 2 of 2	Design	
2	4	Tract Pwr	General Drawings	4.8.1	Overall Power Flow Diagram Sht 1	Design	
2	4	Tract Pwr	General Drawings	4.8.1	Overall Power Flow Diagram Sht 2	Design	
2	4	Tract Pwr	General Drawings	4.8.1	One Line HV Distribution Drawing Sht. 1	Design	
2	4	Tract Pwr	General Drawings	4.8.1	One Line HV Distribution Drawing Sht. 2	Design	
2	4	Tract Pwr	General Drawings	4.8.1	34.5 KV Distribution Dwg.	Design	
2	4	Tract Pwr	General Drawings	4.8.1	34.5 KV Distribution Dwg.	Design	
2	4	Tract Pwr	General Drawings	4.8.1	34.5 KV Distribution Dwg.	Design	
2	4	Tract Pwr	General Drawings	4.8.1	Emergency Trip Station Layout Sht 1	Design	
2	4	Tract Pwr	General Drawings	4.8.1	Emergency Trip Station Layout Sht 2	Design	
2	4	Tract Pwr	General Drawings	4.8.1	Emergency Trip Station Layout Sht 3	Design	
2	4	Tract Pwr	General Drawings	4.8.1	Emergency Trip Station Layout Sht 4	Design	
2	4	Tract Pwr	General Drawings	4.8.1	Emergency Trip Station Layout Sht 5	Design	
2	4	Tract Pwr	General Drawings	4.8.1	Emergency Trip Station Layout Sht 6	Design	
2	4	Tract Pwr	General Drawings	4.8.1	Systemwide Contact Rail Layout Plan Sht 1	Design	
2	4	Tract Pwr	General Drawings	4.8.1	Systemwide Contact Rail Layout Plan Sht 2	Design	
2	4	Tract Pwr	General Drawings	4.8.1	Systemwide Contact Rail Layout Plan Sht 3	Design	
2	4	Tract Pwr	General Drawings	4.8.1	Systemwide Contact Rail Layout Plan Sht 4	Design	
2	4	Tract Pwr	General Drawings	4.8.1	Systemwide Contact Rail Layout Plan Sht 5	Design	
2	4	Tract Pwr	General Drawings	4.8.1	Systemwide Contact Rail Layout Plan Sht 6	Design	
2	4	Tract Pwr	General Drawings	4.8.1	Systemwide Contact Rail Layout Plan Sht 7	Design	
2	4	Tract Pwr	General Drawings	4.8.1	Systemwide Contact Rail Layout Plan Sht 8	Design	
2	4	Tract Pwr	General Drawings	4.8.1	DC Distribution from TPSS to ROW Sht 1	Design	
2	4	Tract Pwr	General Drawings	4.8.1	DC Distribution from TBS to ROW Sht 1	Design	
2	4	Tract Pwr	General Drawings	4.8.1	Typical Duct Interface	Design	

LVL 1	LVL 2	Discipline	Dwg Group		Drawing Description	Drawing Type	Drawing Count by Group
WBS				SOW Para	DESCRIPTION		
						Design, Diag. or Standard	SOW No.
					TRACTION POWER		
2	4	Tract Pwr	General Drawings	4.8.1	Cathodic Protection Sht 1	Design	
2	4	Tract Pwr	General Drawings	4.8.1	Cathodic Protection Sht 2	Design	
2	4	Tract Pwr	General Drawings	4.8.1	Cathodic Protection Sht 3	Design	
2	4	Tract Pwr	General Drawings	4.8.1	Cathodic Protection Sht 4	Design	
2	4	Tract Pwr	General Drawings	4.8.1	Cathodic Protection Sht 5	Design	
2	4	Tract Pwr	General Drawings	4.8.1	Cathodic Protection Sht 6	Design	
2	4	Tract Pwr	General Drawings	4.8.1	Contact Rail Heater Schedule	Design	
2	4	Tract Pwr	General Drawings	4.8.1	Contact Rail Heating Plan-SH1	Design	
2	4	Tract Pwr	General Drawings	4.8.1	Contact Rail Heating Plan-SH2	Design	
2	4	Tract Pwr	General Drawings	4.8.1	Contact Rail Heating Plan-SH3	Design	
2	4	Tract Pwr	General Drawings	4.8.1	Contact Rail Heating Plan-SH4	Design	
2	4	Tract Pwr	General Drawings	4.8.1	Contact Rail Heating Plan-SH5	Design	
2	4	Tract Pwr	General Drawings	4.8.1	Contact Rail Heating Plan-SH6	Design	
2	4	Tract Pwr	General Drawings	4.8.1	CRH, Zone & Trackside HCP Layout	Design	
2	4	Tract Pwr	General Drawings	4.8.1	Systemwide Schematic for Impedance & Cross Bonds Sht 1	Design	
2	4	Tract Pwr	General Drawings	4.8.1	OCC Power Supervisory MTUs Sht 1	Design	
2	4	Tract Pwr	General Drawings	4.8.1	OCC Interface Terminal Cabinets Sht 1	Design	
2	4	Tract Pwr	General Drawings	4.8.1	OCC Interface Schematics Sht 1	Design	
2	4	Tract Pwr	TPSS #12 Nr Reston Pkwy Sta	4.8.1	One Line Diagram	Design	1
2	4	Tract Pwr	3-TBS 1-1X @ 1428+	4.8.1	One Line Diagram	Design	1
2	4	Tract Pwr	TPSS# 13 adj offset HM Sta	4.8.1	One Line Diagram	Design	1
2	4	Tract Pwr	TPSS # 14 2-1X @ 1527 (Rte 28 TPSS)	4.8.1	One Line Diagram	Design	1
2	4	Tract Pwr	TPSS # 15 @ 1592+	4.8.1	One Line Diagram	Design	1
2	4	Tract Pwr	TPSS #16 Sta Dulles Airport Sta	4.8.1	DC Cable Layout Sh. 1	Design	4
2	4	Tract Pwr	TPSS #16 Sta Dulles Airport Sta	4.8.1	DC Cable Layout Sh. 2	Design	
2	4	Tract Pwr	TPSS #16 Sta Dulles Airport Sta	4.8.1	Interface to Systemwide Duct Sht 1	Design	
2	4	Tract Pwr	TPSS #16 Sta Dulles Airport Sta	4.8.1	Floor Plan & Equipment Layout	Design	
2	4	Tract Pwr	TPSS #16 Sta Dulles Airport Sta	4.8.1	One Line Diagram	Design	13
2	4	Tract Pwr	TPSS #16 Sta Dulles Airport Sta	4.8.1	Elem. Diagm AC Bkr/ Rect. Cont. Sht 1	Design	
2	4	Tract Pwr	TPSS #16 Sta Dulles Airport Sta	4.8.1	Elem Diagm DC Bkr Control Sht 1	Design	
2	4	Tract Pwr	TPSS #16 Sta Dulles Airport Sta	4.8.1	Annunciator Panel Details	Design	
2	4	Tract Pwr	TPSS #16 Sta Dulles Airport Sta	4.8.1	AEMS interfacing Cab. & RTU Conn	Design	
2	4	Tract Pwr	TPSS #16 Sta Dulles Airport Sta	4.8.1	Supervisory Controls Cab & DTS Conn	Design	
2	4	Tract Pwr	TPSS #16 Sta Dulles Airport Sta	4.8.1	Cable Schedule Sht 1	Design	
2	4	Tract Pwr	TPSS #16 Sta Dulles Airport Sta	4.8.1	Equipment Interconnection Diagrams Sht. 1	Design	
2	4	Tract Pwr	TPSS #16 Sta Dulles Airport Sta	4.8.1	Stray Current Protection (Negative Drainage)	Design	
2	4	Tract Pwr	TPSS #16 Sta Dulles Airport Sta	4.8.1	Grounding Plan	Design	
2	4	Tract Pwr	TPSS #16 Sta Dulles Airport Sta	4.8.1	Tunnel Ventilation Control Sht 1	Design	
2	4	Tract Pwr	TPSS #16 Sta Dulles Airport Sta	4.8.1	Tunnel Ventilation Control Sht 2	Design	
2	4	Tract Pwr	TPSS #16 Sta Dulles Airport Sta	4.8.1	Tunnel Ventilation Control Sht 3	Design	
2	4	Tract Pwr	TPSS #17 Pocket Track OB	4.8.1	One Line Diagram	Design	1
2	4	Tract Pwr	TPSS #18 2-1X @ 1790	4.8.1	One Line Diagram	Design	1
2	4	Tract Pwr	TPSS #19 @ 1859+	4.8.1	One Line Diagram	Design	1
2	4	Tract Pwr	4-TBS Adj Rt. 772	4.8.1	One Line Diagram	Design	1
2	4	Tract Pwr	TPSS # 20 Adj offset Rte 772	4.8.1	One Line Diagram	Design	1
2	4	Tract Pwr	5-TBS @ 1929	4.8.1	One Line Diagram	Design	1
2	4	Tract Pwr	TPSS 21 Y15 Yd Storage Track Throat	4.8.1	DC Cable Layout Sh. 1	Design	14
2	4	Tract Pwr	TPSS 21 Y15 Yd Storage Track Throat	4.8.1	DC Cable Layout Sh. 2	Design	
2	4	Tract Pwr	TPSS 21 Y15 Yd Storage Track Throat	4.8.1	Interface to Systemwide Duct Sht 1	Design	
2	4	Tract Pwr	TPSS 21 Y15 Yd Storage Track Throat	4.8.1	Floor Plan & Equipment Layout	Design	
2	4	Tract Pwr	TPSS 21 Y15 Yd Storage Track Throat	4.8.1	Stray Current Protection (Negative Drainage)	Design	
2	4	Tract Pwr	TPSS 21 Y15 Yd Storage Track Throat	4.8.1	One Line Diagram	Design	
2	4	Tract Pwr	TPSS 21 Y15 Yd Storage Track Throat	4.8.1	Elem. Diagm AC Bkr/ Rect. Cont. Sht 1	Design	
2	4	Tract Pwr	TPSS 21 Y15 Yd Storage Track Throat	4.8.1	Elem Diagm DC Bkr Control Sht 1	Design	
2	4	Tract Pwr	TPSS 21 Y15 Yd Storage Track Throat	4.8.1	Annunciator Panel Details	Design	
2	4	Tract Pwr	TPSS 21 Y15 Yd Storage Track Throat	4.8.1	AEMS interfacing Cab. & RTU Conn	Design	
2	4	Tract Pwr	TPSS 21 Y15 Yd Storage Track Throat	4.8.1	Supervisory Controls Cab & DTS Conn	Design	
2	4	Tract Pwr	TPSS 21 Y15 Yd Storage Track Throat	4.8.1	Cable Schedule Sht 1	Design	
2	4	Tract Pwr	TPSS 21 Y15 Yd Storage Track Throat	4.8.1	Equipment Interconnection Diagrams Sht. 1	Design	
2	4	Tract Pwr	TPSS 21 Y15 Yd Storage Track Throat	4.8.1	Grounding Plan	Design	
				4.8.1 Total			**280**
				Grand Total			**280**

LVL 1	LVL 2	Discipline	Dwg Group		Drawing Description	Drawing Type	Drawing Count by Group
WBS				SOW Para	DESCRIPTION		
						Design, Diag. or Standard	SOW No.
					TRAIN CONTROL		
					Design Drawings - Total		355
					4.9.1 Total		165
					4.9.2 Total		190
1	4	Train Cont	XP1-TC-G-001	4.9.1	WTC Mainline Site Plan - Phase 1 (MOS)	Design	
1	4	Train Cont	XP1-TC-G-003	4.9.1	WTC Mainline Drawing Index (Ph1,Sh1)	Design	
1	4	Train Cont	XP1-TC-G-004	4.9.1	WTC Mainline Drawing Index (Ph1,Sh2)	Design	
1	4	Train Cont	XP1-TC-G-005	4.9.1	WTC Mainline Drawing Index (Ph1,Sh3)	Design	
1	4	Train Cont	ATC-X03-G-001	4.9.1	Location Information Chart	Design	
1	4	Train Cont	ATC-X03-G-002	4.9.1	TCR Arrangement Plan	Design	
1	4	Train Cont	ATC-X03-G-012	4.9.1	Double Line Track Plan - South	Design	
1	4	Train Cont	ATC-X03-G-013	4.9.1	Double Line Track Plan - Center	Design	
1	4	Train Cont	ATC-X03-G-014	4.9.1	Double Line Track Plans - North	Design	
1	4	Train Cont	ATC-X03-I-001	4.9.1	Route & Locking Chart	Design	
1	4	Train Cont	ATC-X03-I-003	4.9.1	Interlocking Control Panel Layout	Design	
1	4	Train Cont	ATC-X03-IDW-001	4.9.1	Layout of IDW Zones & Sub-Zones	Design	
1	4	Train Cont	ATC-X03-IDW-003	4.9.1	IDW Schematic Cable Layout & D.B.	Design	
1	4	Train Cont	ATC-X03-IDW-004	4.9.1	IDW Alarm Circuits Sh. 1	Design	
1	4	Train Cont	ATC-X08-G-001	4.9.1	Location Information Chart	Design	
1	4	Train Cont	ATC-X08-G-002	4.9.1	TCR Arrangement Plan	Design	
1	4	Train Cont	ATC-X08-G-012	4.9.1	Double Line Track Plan - South	Design	
1	4	Train Cont	ATC-X08-G-013	4.9.1	Double Line Track Plan - Center	Design	
1	4	Train Cont	ATC-X08-G-014	4.9.1	Double Line Track Plan - North	Design	
1	4	Train Cont	ATC-X08-IDW-001	4.9.1	Layout of IDW Zones & Sub-Zones	Design	
1	4	Train Cont	ATC-X08-IDW-003	4.9.1	IDW Schematic Cable Layout & D.B.	Design	
1	4	Train Cont	ATC-X08-IDW-004	4.9.1	IDW Alarm Circuits Sh. 1	Design	
1	4	Train Cont	ATC-X09-G-001	4.9.1	Location Information Chart	Design	
1	4	Train Cont	ATC-X09-G-002	4.9.1	TCR Arrangement Plan	Design	
1	4	Train Cont	ATC-X09-G-012	4.9.1	Double Line Track Plan - South	Design	
1	4	Train Cont	ATC-X09-G-013	4.9.1	Double Line Track Plan - Center	Design	
1	4	Train Cont	ATC-X09-G-014	4.9.1	Double Line Track Plan - North	Design	
1	4	Train Cont	ATC-X09-I-001	4.9.1	Route & Locking Chart	Design	
1	4	Train Cont	ATC-X09-I-003	4.9.1	Interlocking Control Panel Layout	Design	
1	4	Train Cont	ATC-X09-IDW-001	4.9.1	Layout of IDW Zones & Sub-Zones	Design	
1	4	Train Cont	ATC-X09-IDW-003	4.9.1	IDW Schematic Cable Layout & D.B.	Design	
1	4	Train Cont	ATC-X09-IDW-004	4.9.1	IDW Alarm Circuits Sh. 1	Design	
1	4	Train Cont	ATC-X10-G-001	4.9.1	Location Information Chart	Design	
1	4	Train Cont	ATC-X10-G-002	4.9.1	TCR Arrangement Plan	Design	
1	4	Train Cont	ATC-X10-G-012	4.9.1	Double Line Track Plan - South	Design	
1	4	Train Cont	ATC-X10-G-013	4.9.1	Double Line Track Plan - Center	Design	
1	4	Train Cont	ATC-X10-G-014	4.9.1	Double Line Track Plan - North	Design	
1	4	Train Cont	ATC-X10-I-001	4.9.1	Route & Locking Chart	Design	
1	4	Train Cont	ATC-X10-I-003	4.9.1	Interlocking Control Panel Layout	Design	
1	4	Train Cont	ATC-X10-IDW-001	4.9.1	Layout of IDW Zones & Sub-Zones	Design	
1	4	Train Cont	ATC-X10-IDW-003	4.9.1	IDW Schematic Cable Layout & D.B.	Design	
1	4	Train Cont	ATC-X10-IDW-004	4.9.1	IDW Alarm Circuits Sh. 1	Design	
1	4	Train Cont	TC-K99-G-002	4.9.1	K99 Yard Site Plan	Design	
1	4	Train Cont	TC-K99-G-003	4.9.1	K99 Yard Index of TC Drawings Sh. 1	Design	
2	4	Train Cont	XP2-TC-G-002	4.9.1	WTC Mainline Site Plan - Phase 2	Design	
2	4	Train Cont	XP2-TC-G-003	4.9.1	WTC Mainline Drawing Index (Ph.2, Sh.1)	Design	
2	4	Train Cont	ATC-X17A-G-011	4.9.1	Double Line Track Plan - Center	Design	
2	4	Train Cont	ATC-X17A-G-012	4.9.1	Double Line Track Plan - North	Design	
2	4	Train Cont	ATC-X17A-I-003	4.9.1	Route & Locking Chart	Design	
2	4	Train Cont	ATC-X17A-IDW-003	4.9.1	IDW Schematic Cable Layout & D.B.	Design	
2	4	Train Cont	ATC-X17A-IDW-004	4.9.1	IDW Alarm Circuits Sh. 1	Design	
2	4	Train Cont	ATC-X18-G-011	4.9.1	Double Line Track Plans - South	Design	
2	4	Train Cont	ATC-X18-G-012	4.9.1	Double Line Track Plans - Center	Design	
2	4	Train Cont	ATC-X18-G-013	4.9.1	Double Line Track Plans - North	Design	
2	4	Train Cont	ATC-X18-I-001	4.9.1	Route & Locking Chart Sh. 1	Design	
2	4	Train Cont	ATC-X18-IDW-003	4.9.1	IDW Schematic Cable Layout & D.B.	Design	
2	4	Train Cont	ATC-X18-IDW-004	4.9.1	IDW Alarm Circuits Sh. 1	Design	
2	4	Train Cont	TC-Y15-G-002	4.9.1	Y15 Yard - Site Plan	Design	
2	4	Train Cont	TC-Y15-G-003	4.9.1	Y15 Yard - Index of YS&IC Drawings Sh. 1	Design	
2	4	Train Cont	TC-Y15-TYP-003	4.9.1	Typ.Relay/Contact Location Chart	Design	
2	4	Train Cont	TC-Y15-PWR-001	4.9.1	Yard TC Energy Dist. Schematic	Design	
2	4	Train Cont	TC-Y15-PWR-002	4.9.1	DC Power Distribution	Design	

LVL 1	LVL 2	Discipline	Dwg Group		Drawing Description	Drawing Type	Drawing Count by Group
WBS				SOW Para	DESCRIPTION		
						Design, Diag. or Standard	SOW No.
					TRAIN CONTROL		
2	4	Train Cont	TC-Y15-PWR-003	4.9.1	AC Power Distribution	Design	
2	4	Train Cont	TC-Y15-PWR-004	4.9.1	Spec. Switch Machine Pwr. Distribution	Design	
2	4	Train Cont	TC-Y15-TEL-001	4.9.1	Yard TC Maint. Tel. System Schematic	Design	
2	4	Train Cont	TC-Y15-C&D-001	4.9.1	TC Conduit and Duct Layout Sh. 1	Design	
2	4	Train Cont	TC-Y15-C&D-002	4.9.1	TC Conduit and Duct Layout Sh. 2	Design	
2	4	Train Cont	TC-Y15-C&D-003	4.9.1	TC Conduit and Duct Layout Sh. 3	Design	
2	4	Train Cont	TC-Y15-DLTP-001	4.9.1	YS&I Double Line Track Plan Sh. 1	Design	
2	4	Train Cont	TC-Y15-DLTP-002	4.9.1	YS&I Double Line Track Plan Sh. 2	Design	
2	4	Train Cont	TC-Y15-DLTP-003	4.9.1	YS&I Double Line Track Plan Sh. 3	Design	
2	4	Train Cont	TC-Y15-DLTP-004	4.9.1	YS&I Double Line Track Plan Sh. 4	Design	
2	4	Train Cont	TC-Y15-DLTP-005	4.9.1	YS&I Double Line Track Plan Sh. 5	Design	
2	4	Train Cont	TC-Y15-DLTP-006	4.9.1	YS&I Double Line Track Plan Sh. 6	Design	
2	4	Train Cont	TC-Y15-R&LC-001	4.9.1	YS&I Route & Locking Chart Sh. 1	Design	
2	4	Train Cont	TC-Y15-ICM-001	4.9.1	Yard Interlocking Control Machine Sh. 1	Design	
2	4	Train Cont	TC-Y15-ICM-002	4.9.1	Yard Interlocking Control Machine Sh. 2	Design	
2	4	Train Cont	TC-Y15-ICM-003	4.9.1	Yard Interlocking Control Machine Sh. 3	Design	
2	4	Train Cont	TC-Y15-YCMD-001	4.9.1	Yard Cont. Mach. Displays / Panels Sh. 1	Design	
2	4	Train Cont	TC-Y15-YCMD-002	4.9.1	Yard Cont. Mach. Displays / Panels Sh. 2	Design	
2	4	Train Cont	TC-Y15-YCMD-003	4.9.1	Yard Cont. Mach. Displays / Panels Sh. 3	Design	
2	4	Train Cont	TC-Y15-CKT-001	4.9.1	Pushbutton Repeater Circuits	Design	
2	4	Train Cont	TC-Y15-CKT-011	4.9.1	Switch Test Key Circuits	Design	
2	4	Train Cont	TC-Y15-CKT-021	4.9.1	Initiation Circuits	Design	
2	4	Train Cont	TC-Y15-CKT-031	4.9.1	Completion Circuits	Design	
2	4	Train Cont	TC-Y15-CKT-041	4.9.1	Traffic Stick Circuits	Design	
2	4	Train Cont	TC-Y15-CKT-046	4.9.1	Line Repeater Circuits	Design	
2	4	Train Cont	TC-Y15-CKT-048	4.9.1	Time Locking Circuits	Design	
2	4	Train Cont	TC-Y15-CKT-061	4.9.1	Route Stick Circuits	Design	
2	4	Train Cont	TC-Y15-CKT-065	4.9.1	Lock Circuits	Design	
2	4	Train Cont	TC-Y15-CKT-070	4.9.1	Typical Switch Control Circuits	Design	
2	4	Train Cont	TC-Y15-CKT-071	4.9.1	Trailable Sw. Operating Ckts.	Design	
2	4	Train Cont	TC-Y15-CKT-075	4.9.1	Trailable Switch Repeater Ckts.	Design	
2	4	Train Cont	TC-Y15-CKT-081	4.9.1	Switch Correspondence Circuits	Design	
2	4	Train Cont	TC-Y15-CKT-091	4.9.1	Route Check Network	Design	
2	4	Train Cont	TC-Y15-CKT-096	4.9.1	Signal Control Network	Design	
2	4	Train Cont	TC-Y15-CKT-101	4.9.1	Controlled Signal Lighting Circuits	Design	
2	4	Train Cont	TC-Y15-CKT-102	4.9.1	Marker Signal Lighting Circuits	Design	
2	4	Train Cont	TC-Y15-CKT-103	4.9.1	Ground Detector & Pwr.Off Circuits	Design	
2	4	Train Cont	TC-Y15-CKT-104	4.9.1	60Hz Track Transformer Circuits	Design	
2	4	Train Cont	TC-Y15-CKT-105	4.9.1	AC Track Relay Circuits	Design	
2	4	Train Cont	TC-Y15-CKT-111	4.9.1	Series Track Circuits	Design	
2	4	Train Cont	TC-Y15-CKT-121	4.9.1	Relay Repeater Circuits	Design	
2	4	Train Cont	TC-Y15-CKT-131	4.9.1	Snowmelter Control & Indication Ckts.	Design	
2	4	Train Cont	TC-Y15-CML-001	4.9.1	Control Mach.Display Ckts/Logic Sh.1	Design	
2	4	Train Cont	TC-Y15-TFK-051	4.9.1	Vital Traffic Circuits - Yard Lead 1	Design	
2	4	Train Cont	TC-Y15-TFK-052	4.9.1	Vital Traffic Circuits - Yard Lead 2	Design	
2	4	Train Cont	TC-Y15-TFK-053	4.9.1	Vital Traffic Circuits - Yard Lead 3	Design	
2	4	Train Cont	TC-Y15-VL-061	4.9.1	Vital Line Circuits / Logic Sh. 1	Design	
2	4	Train Cont	TC-Y15-VL-062	4.9.1	Vital Line Circuits / Logic Sh. 2	Design	
2	4	Train Cont	TC-Y15-LO-001	4.9.1	Typical Yard Signal Layout	Design	
2	4	Train Cont	TC-Y15-LO-002	4.9.1	Typical Yard Snowmelter Layout	Design	
2	4	Train Cont	TC-Y15-LO-003	4.9.1	Typical Yard Switch Rod Heater Layout	Design	
2	4	Train Cont	TC-Y15-LO-004	4.9.1	Typical Yard Snowmelter Control Case	Design	
2	4	Train Cont	TC-Y15-LO-005	4.9.1	Typical Yard Track Circuit Connections	Design	
2	4	Train Cont	TC-Y15-LO-006	4.9.1	Typical Yard Negative Return Bonding	Design	
2	4	Train Cont	TC-Y15-LO-007	4.9.1	Typical Yard Signal Rail Bonding Sh. 1	Design	
2	4	Train Cont	TC-Y15-LO-008	4.9.1	Typical Yard Signal Rail Bonding Sh. 2	Design	
2	4	Train Cont	TC-Y15-LO-009	4.9.1	Typical Cable Dist. Case Arrangement	Design	
2	4	Train Cont	TC-Y15-LO-010	4.9.1	Yard TC & Comm. Rooms	Design	
2	4	Train Cont	TC-Y15-LO-011	4.9.1	TCR Arrangement Plans Sh. 1	Design	
2	4	Train Cont	TC-Y15-LO-012	4.9.1	TCR Arrangement Plans Sh. 2	Design	
2	4	Train Cont	TC-Y15-LO-013	4.9.1	Typ. Trail. Yard Sw. Mach. Layout Sh. 1	Design	
2	4	Train Cont	TC-Y15-LO-014	4.9.1	Typ. Trail. Yard Sw. Mach. Layout Sh. 2	Design	
2	4	Train Cont	XP2-TC-G-000	4.9.1	Site Specific Mainline ATC Control Points	Design	
3	4	Train Cont	XP1-TC=AR=011	4.9.1	Typ. TCR Layout - Inline Station (No Interlocking)	Design	
3	4	Train Cont	XP1-TC=AR=012	4.9.1	Typ. TCR Layout - Station w/ DX-O Interlocking	Design	
3	4	Train Cont	XP1-TC=AR=013	4.9.1	Typ. TCR Layout - Station w/ Pocket Interlocking	Design	
3	4	Train Cont	XP1-TC=AR=014	4.9.1	Typ. TCR Layout - Remote TCR w/ DX-O Interlking	Design	

LVL 1	LVL 2	Discipline	Dwg Group		Drawing Description	Drawing Type	Drawing Count by Group
WBS				SOW Para	DESCRIPTION		
						Design, Diag. or Standard	SOW No.
					TRAIN CONTROL		
3	4	Train Cont	XP1-TC=AR=015	4.9.1	Typ. TCR Layout - TerminalStation w/ TB Interlking	Design	
3	4	Train Cont	XP1-TC=AR=016	4.9.1	CBTC ~~Room~~ Proto Type Sht. 1	Design	
3	4	Train Cont	XP1-TC=AR=017	4.9.1	CBTC Proto Type Sht. 2	Design	
3	4	Train Cont	XP1-TC=AR=018	4.9.1	CBTC Proto Type Sht. 3	Design	
3	4	Train Cont	XP1-TC=AR=019	4.9.1	CBTC Proto Type Sht. 4	Design	
3	4	Train Cont	XP1-TC=AR=019	4.9.1	CBTC Proto Type Sht. 5	Design	
3	4	Train Cont	TYP-TC-VP-001	4.9.1	Typical - RTU and Vital Processor Outputs	DD Dwgs	
3	4	Train Cont	TYP-TC-VP-002	4.9.1	Typical - RTU and Vital Processor Inputs	DD Dwgs	
3	4	Train Cont	TYP-TC-OCC-001	4.9.1	OCC Interfaces Sht. 1	DD Dwgs	
3	4	Train Cont	TYP-TC-OCC-002	4.9.1	OCC Interfaces Sht. 2	DD Dwgs	
3	4	Train Cont	TYP-TC-OCC-003	4.9.1	OCC Interfaces Sht. 3	DD Dwgs	
1	4	Train Cont	TC-K99-I-011	4.9.1	YS&I Route & Locking Chart Sh. 1	Design	
1	4	Train Cont	TC-K99-I-013	4.9.1	Yard Interlocking Control Machine Rev.	Design	
1	4	Train Cont	TC-K99-I-016	4.9.1	Yard Control Machine Displays	Design	
3	4	Train Cont	TC-YD-CKT-001	4.9.1	Typical Switch Control Circuits	Design	
3	4	Train Cont	TC-YD-CKT-002	4.9.1	Typical Trailable Sw. Operating Ckts. Sh. 1	Design	
3	4	Train Cont	TC-YD-CKT-003	4.9.1	Typical Yard Track Circuit Connections	Design	
3	4	Train Cont	TC-YD-CKT-004	4.9.1	Typical Yard Negative Return Bonding	Design	
3	4	Train Cont	TC-YD-CKT-005	4.9.1	Typical Yard Signal Rail Bonding Sh. 1	Design	
3	4	Train Cont	TYP-IDW-001	4.9.1	Index of Typ.Intrusion Detection Warning Sys. Dwgs.	DD Dwgs	
3	4	Train Cont	TYP-IDW-003	4.9.1	Typ.Loc.of IDW S-Z. Eqpt./Fence Sh. 1	DD Dwgs	
3	4	Train Cont	TYP-IDW-004	4.9.1	Typ.Loc.of IDW S-Z. Eqpt./Fence Sh. 2	DD Dwgs	
3	4	Train Cont	TYP-IDW-005	4.9.1	Typ.Loc.of T-O Boxes on Fence Sh. 1	DD Dwgs	
3	4	Train Cont	TYPIDW-006	4.9.1	Typ.Loc.of T-O Boxes on Fence Sh. 2	DD Dwgs	
3	4	Train Cont	TYP-IDW-011	4.9.1	Typ. IDW Box Internal Mtg. Panel	DD Dwgs	
3	4	Train Cont	TYPIDW-017	4.9.1	Typ. ID Control Unit Block Diagram	DD Dwgs	
3	4	Train Cont	TYP-IDW-021	4.9.1	Typical IDW Bypass Control Panel	DD Dwgs	
3	4	Train Cont	TC-YD-G-005	4.9.1	Typical YS&IC Symbol Plan	Design	
3	4	Train Cont	TC-YD-G-006	4.9.1	TC Clearance Envelope	Design	
3	4	Train Cont	TC-YD-G-007	4.9.1	Typical Yard TC Relay Nomenclature	Design	
3	4	Train Cont	TC-YD-G-008	4.9.1	Typ.Relay/Contact Location Chart	Design	
3	4	Train Cont	TC-YD-AR-001	4.9.1	Typ. Trail. Yard Sw. Mach. Layout Sh. 1	Design	
3	4	Train Cont	TC-YD-AR-007	4.9.1	Typical Cable Dist. Case Arrangement	Design	
3	4	Train Cont	TC-YD-AR-008	4.9.1	Typical Yard Signal Layout	Design	
3	4	Train Cont	TC-YD-AR-009	4.9.1	Typical Yard Snowmelter Layout	Design	
3	4	Train Cont	TC-YD-AR-010	4.9.1	Typical Yard Switch Rod Heater Layout	Design	
				4.9.1 Total			165
1	4	Train Cont	ATC-KXX-G-001	4.9.2	Location Information Chart	Design	
1	4	Train Cont	ATC-KXX-G-002	4.9.2	TCR Arrangement Plan	Design	
1	4	Train Cont	ATC-KXX-G-003	4.9.2	DTS Superv. C&I Schem. Cable Plan	Design	
1	4	Train Cont	ATC-KXX-C-001	4.9.2	Vital Traffic Circuits	Design	
1	4	Train Cont	ATC-KXX-C-002	4.9.2	Line Repeater Circuits	Design	
1	4	Train Cont	ATC-KXX-G-013	4.9.2	Double Line Track Plan - West Near	Design	
1	4	Train Cont	ATC-KXX-G-014	4.9.2	Double Line Track Plans - West Far	Design	
1	4	Train Cont	ATC-KXX-S-011	4.9.2	Speed Command Circuits - Sh. A	Design	
1	4	Train Cont	ATC-KXX-C-003	4.9.2	Track Indication Panel Circuits	Design	
1	4	Train Cont	ATC-KXX-G-004	4.9.2	Track Indication Panel Layout	Design	
1	4	Train Cont	ATC-KXX-G-005	4.9.2	TC/Comm Interface Cab. Wiring Diag.	Design	
1	4	Train Cont	ATC-KXX-IDW-001	4.9.2	Layout of IDW Zones & Sub-Zones Sh.1	Design	
1	4	Train Cont	ATC-KXX-IDW-003	4.9.2	IDW Schematic Cable Layout & D.B.	Design	
1	4	Train Cont	ATC-KXX-IDW-004	4.9.2	IDW Alarm Circuits Sh. 1	Design	
1	4	Train Cont	ATC-KZZ-G-001	4.9.2	Location Information Chart	Design	
1	4	Train Cont	ATC-KZZ-G-002	4.9.2	TCR Arrangement Plan	Design	
1	4	Train Cont	ATCKZZ-G-003	4.9.2	DTS Superv. C&I Schem. Cable Plan	Design	
1	4	Train Cont	ATC-KZZ-C-001	4.9.2	Vital Traffic Circuits	Design	
1	4	Train Cont	ATC-KZZ-C-002	4.9.2	Line Repeater Circuits	Design	
1	4	Train Cont	ATC-KZZ-G-011	4.9.2	Double Line Track Plan East Far	Design	
1	4	Train Cont	ATC-KZZ-G-012	4.9.2	Double Line Track Plan - East Near	Design	
1	4	Train Cont	ATC-KZZ-G-013	4.9.2	Double Line Track Plan - Center	Design	
1	4	Train Cont	ATC-KZZ-S-001	4.9.2	Speed Command Circuits - Sh. A	Design	
1	4	Train Cont	ATC-KZZ-C-003	4.9.2	Interlocking Control Panel Circuits	Design	
1	4	Train Cont	ATC-KZZ- I - 001	4.9.2	Route & Locking Chart Sh. 1	Design	
1	4	Train Cont	ATC-KZZ- I - 003	4.9.2	Interlocking Control Panel Layout Sh.1	Design	
1	4	Train Cont	ATC-KZZ-G-005	4.9.2	TC/Comm Interface Cab. Wiring Diag.	Design	
1	4	Train Cont	ATC-KZZ-IDW-001	4.9.2	Layout of IDW Zones & Sub-Zones Sh.1	Design	
1	4	Train Cont	ATC-KZZ-IDW-003	4.9.2	IDW Schematic Cable Layout & D.B.	Design	
1	4	Train Cont	ATC-KZZ-IDW-004	4.9.2	IDW Alarm Circuits Sh. 1	Design	

LVL 1	LVL 2	Discipline	Dwg Group		Drawing Description	Drawing Type	Drawing Count by Group
WBS				SOW Para	DESCRIPTION		
						Design, Diag. or Standard	SOW No.
					TRAIN CONTROL		
1	4	Train Cont	ATC-KYY-G-001	4.9.2	Location Information Chart	Design	
1	4	Train Cont	ATC-KYY-G-002	4.9.2	TCR Arrangement Plan	Design	
1	4	Train Cont	ATC-KYY-G-011	4.9.2	Double Line Track Plan - East	Design	
1	4	Train Cont	ATC-KYY-G-012	4.9.2	Double Line Track Plan - Center	Design	
1	4	Train Cont	ATC-KYY-G-013	4.9.2	Double Line Track Plan - West	Design	
1	4	Train Cont	ATC-KYY-G-014	4.9.2	Double Line Track Plan - North	Design	
~~1~~	4	Train Cont	~~ATC-KYY-S-011~~	4.9.2	Speed Command Circuits - Sh. A	Design	
1	4	Train Cont	ATC-KYY-I-001	4.9.2	Route & Locking Chart Sh. 1	Design	
1	4	Train Cont	ATC-KYY- I - 003	4.9.2	Interlocking Control Panel Layout Sh.1	Design	
1	4	Train Cont	ATC-KYY-IDW-001	4.9.2	Layout of IDW Zones & Sub-Zones	Design	
1	4	Train Cont	ATC-KYY-IDW-003	4.9.2	IDW Schematic Cable Layout & D.B.	Design	
1	4	Train Cont	ATC-KYY-IDW-004	4.9.2	IDW Alarm Circuits Sh. 1	Design	
1	4	Train Cont	ATC-X02-G-001	4.9.2	Location Information Chart	Design	
1	4	Train Cont	ATC-X02-G-002	4.9.2	TCR Arrangement Plan	Design	
1	4	Train Cont	ATC-X02-G-012	4.9.2	Double Line Track Plan - South	Design	
1	4	Train Cont	ATC-X02-G-013	4.9.2	Double Line Track Plan - Center	Design	
1	4	Train Cont	ATC-X02-G-014	4.9.2	Double Line Track Plan - North	Design	
~~1~~	4	Train Cont	~~ATC-X02-S-011~~	4.9.2	Speed Command Circuits - Sh. A	Design	
1	4	Train Cont	ATC-X02-I-001	4.9.2	Route & Locking Chart	Design	
1	4	Train Cont	ATC-X02-I-003	4.9.2	Interlocking Control Panel Layout	Design	
1	4	Train Cont	ATC-X02-IDW-001	4.9.2	Layout of IDW Zones & Sub-Zones	Design	
1	4	Train Cont	ATC-X02-IDW-003	4.9.2	IDW Schematic Cable Layout & D.B.	Design	
1	4	Train Cont	ATC-X02-IDW-004	4.9.2	IDW Alarm Circuits Sh. 1	Design	
1	4	Train Cont	ATC-X04-G-001	4.9.2	Location Information Chart	Design	
1	4	Train Cont	ATC-X04-G-002	4.9.2	TCR Arrangement Plan	Design	
1	4	Train Cont	ATC-X04-G-012	4.9.2	Double Line Track Plans South	Design	
1	4	Train Cont	ATC-X04-G-013	4.9.2	Double Line Track Plans Center	Design	
1	4	Train Cont	ATC-X04-G-014	4.9.2	Double Line Track Plans North - Near	Design	
1	4	Train Cont	ATC-X04-G-015	4.9.2	Double Line Track Plans North - Far	Design	
1	4	Train Cont	ATC-X04-I-001	4.9.2	Route & Locking Chart Sh. 1	Design	
1	4	Train Cont	ATC-X04-I-003	4.9.2	Interlocking Control Panel Layout	Design	
1	4	Train Cont	ATC-X05-G-001	4.9.2	Location Information Chart	Design	
1	4	Train Cont	ATC-X05-G-002	4.9.2	TCR Arrangement Plan	Design	
1	4	Train Cont	ATC-X05-G-012	4.9.2	Double Line Track Plans - South	Design	
1	4	Train Cont	ATC-X05-G-013	4.9.2	Double Line Track Plans - Center	Design	
1	4	Train Cont	ATC-X05-G-014	4.9.2	Double Line Track Plans - North	Design	
1	4	Train Cont	ATC-X06-G-001	4.9.2	Location Information Chart	Design	
1	4	Train Cont	ATC-X06-G-002	4.9.2	TCR Arrangement Plan	Design	
1	4	Train Cont	ATC-X06-G-012	4.9.2	Double Line Track Plans - South	Design	
1	4	Train Cont	ATC-X06-G-013	4.9.2	Double Line Track Plans - Center	Design	
1	4	Train Cont	ATC-X06-G-014	4.9.2	Double Line Track Plans - North	Design	
1	4	Train Cont	ATC-X07-G-001	4.9.2	Location Information Chart	Design	
1	4	Train Cont	ATC-X07-G-002	4.9.2	TCR Arrangement Plan	Design	
1	4	Train Cont	ATC-X07-G-004	4.9.2	TCER Arrangement Plan	Design	
1	4	Train Cont	ATC-X07-G-012	4.9.2	Double Line Track Plan - South	Design	
1	4	Train Cont	ATC-X07-G-013	4.9.2	Double Line Track Plan - Center	Design	
1	4	Train Cont	ATC-X07-G-014	4.9.2	Double Line Track Plan - North	Design	
1	4	Train Cont	ATC-X07-I-001	4.9.2	Route & Locking Chart Sh. 1	Design	
1	4	Train Cont	ATC-X07-I-003	4.9.2	Interlocking Control Panel Layout	Design	
1	4	Train Cont	ATC-X07-IDW-001	4.9.2	Layout of IDW Zones & Sub-Zones	Design	
1	4	Train Cont	ATC-X07-IDW-003	4.9.2	IDW Schematic Cable Layout & D.B.	Design	
1	4	Train Cont	ATC-X07-IDW-004	4.9.2	IDW Alarm Circuits Sh. 1	Design	
1	4	Train Cont	ATC-X11-G-001	4.9.2	Location Information Chart	Design	
1	4	Train Cont	ATC-X11-G-002	4.9.2	TCR Arrangement Plan	Design	
1	4	Train Cont	ATC-X11-G-004	4.9.2	TCER Arrangement Plan	Design	
1	4	Train Cont	ATC-X11-G-012	4.9.2	Double Line Track Plan - South	Design	
1	4	Train Cont	ATC-X11-G-013	4.9.2	Double Line Track Plan - Center	Design	
1	4	Train Cont	ATC-X11-G-014	4.9.2	Double Line Track Plan - North	Design	
1	4	Train Cont	ATC-X11-I-001	4.9.2	Route & Locking Chart Sh. 1	Design	
1	4	Train Cont	ATC-X11-I-003	4.9.2	Interlocking Control Panel Layout	Design	
1	4	Train Cont	ATC-X11-I-004	4.9.2	Dispatcher's Control Panel Layout	Design	
1	4	Train Cont	ATC-X11-I-005	4.9.2	Wayside Pushbutton Panel Layouts	Design	
1	4	Train Cont	ATC-X11-IDW-001	4.9.2	Layout of IDW Zones & Sub-Zones	Design	
1	4	Train Cont	ATC-X11-IDW-003	4.9.2	IDW Schematic Cable Layout & D.B.	Design	
1	4	Train Cont	ATC-X11-IDW-004	4.9.2	IDW Alarm Circuits Sh. 1	Design	
1	4	Train Cont	ATC-X11-C-011	4.9.2	Marker Signal Lighting Circuits	Design	
1	4	Train Cont	TC-K99-G-021	4.9.2	YS&I Double Line Track Plan Sh. 1	Design	

LVL 1	LVL 2	Discipline	Dwg Group		Drawing Description	Drawing Type	Drawing Count by Group
WBS				SOW Para	DESCRIPTION		
						Design, Diag. or Standard	SOW No.
					TRAIN CONTROL		
1	4	Train Cont	TC-K99-G-022	4.9.2	YS&I Double Line Track Plan Sh. 2	Design	
1	4	Train Cont	TC-K99-G-023	4.9.2	YS&I Double Line Track Plan Sh. 3	Design	
1	4	Train Cont	TC-K99-G-025	4.9.2	TC Conduit and Duct Layout Sh. 1	Design	
1	4	Train Cont	TC-K99-G-026	4.9.2	TC Conduit and Duct Layout Sh. 2	Design	
1	4	Train Cont	TC-K99-G-028	4.9.2	K99 Yard TC Maint. Tel, Sys. Schematic	Design	
1	4	Train Cont	TC-K99-G-030	4.9.2	K99 Yard TC Energy Dist. Schematic	Design	
1	4	Train Cont	TC-K99-G-031	4.9.2	K99 Yard TC DC Power Distribution	Design	
1	4	Train Cont	TC-K99-G-032	4.9.2	K99 Yard TC AC Power Distribution	Design	
1	4	Train Cont	TC-K99-G-033	4.9.2	K99 Yard Spec. Sw. Machine Pwr. Distrib.	Design	
1	4	Train Cont	TC-K99-C-041	4.9.2	K99 Control Mach.Display Ckts/Logic Sh.1	Design	
1	4	Train Cont	TC-K99-C-041	4.9.2	Pushbutton Repeater Relay Circuits	Design	
1	4	Train Cont	TC-K99-C-046	4.9.2	Switch Test Key Circuits	Design	
1	4	Train Cont	TC-K99-C-051	4.9.2	Route Initiation Circuits	Design	
1	4	Train Cont	TC-K99-C-056	4.9.2	Route Completion Circuits	Design	
1	4	Train Cont	TC-K99-C-061	4.9.2	Traffic Stick Circuits	Design	
1	4	Train Cont	TC-K99-C-066	4.9.2	Vital Traffic Circuits - Yard Lead 3	Design	
1	4	Train Cont	TC-K99-TC-067	4.9.2	Line Repeater Circuits	Design	
1	4	Train Cont	TC-K99-C-071	4.9.2	Time Locking Circuits	Design	
1	4	Train Cont	TC-K99-C-075	4.9.2	Route Stick Circuits	Design	
1	4	Train Cont	TC-K99-C-078	4.9.2	Lock Circuits	Design	
1	4	Train Cont	TC-K99-C-081	4.9.2	Trailable Switch Repeater Ckts.	Design	
1	4	Train Cont	TC-K99-C-086	4.9.2	Switch Corresp. Circuits Sh. 1	Design	
1	4	Train Cont	TC-K99-C-091	4.9.2	Route Check Network Sh. 1	Design	
1	4	Train Cont	TC-K99-C-096	4.9.2	Signal Control Network Sh. 1	Design	
1	4	Train Cont	TC-K99-C-101	4.9.2	Controlled Signal Lighting Circuits	Design	
1	4	Train Cont	TC-K99-C-102	4.9.2	Marker Signal Lighting Circuits	Design	
1	4	Train Cont	TC-K99-C-103	4.9.2	Ground Detector & Pwr.Off Circuits	Design	
1	4	Train Cont	TC-K99-C-104	4.9.2	60Hz Track Transformer Circuits	Design	
1	4	Train Cont	TC-K99-C-105	4.9.2	AC Track Relay Circuits	Design	
1	4	Train Cont	TC-K99-C-106	4.9.2	Series Track Circuits	Design	
1	4	Train Cont	TC-K99-C-111	4.9.2	Relay Repeater Circuits	Design	
1	4	Train Cont	TC-K99-C-115	4.9.2	Snowmelter Cont. & Indication Ckts.	Design	
1	4	Train Cont	TC-K99-C-116	4.9.2	Line Repeater Circuits	Design	
1	4	Train Cont	TC-K99-TCM-001	4.9.2	K99 Yard TC Maint. Tele.Sys. Schematic	Design	
1	4	Train Cont	TC-K99-ARR-011	4.9.2	K99 Yard TC & Comm. Rooms	Design	
1	4	Train Cont	TC-K99-ARR-012	4.9.2	TCR Arrangement Plans Sh. 1	Design	
2	4	Train Cont	ATC-X12-G-012	4.9.2	Double Line Track Plans Sh. 1 - South	Design	
2	4	Train Cont	ATC-X12-G-013	4.9.2	Double Line Track Plans Sh. 2 - Center	Design	
2	4	Train Cont	ATC-X12-G-014	4.9.2	Double Line Track Plans Sh. 3 - North	Design	
2	4	Train Cont	ATC-X12-IDW-003	4.9.2	IDW Schematic Cable Layout & D.B.	Design	
2	4	Train Cont	ATC-X12-IDW-004	4.9.2	IDW Alarm Circuits Sh. 1	Design	
2	4	Train Cont	ATC-X13-G-012	4.9.2	Double Line Track Plans Sh. 1	Design	
2	4	Train Cont	ATC-X13-G-013	4.9.2	Double Line Track Plans Sh. 2	Design	
2	4	Train Cont	ATC-X13-I-001	4.9.2	Route & Locking Chart	Design	
2	4	Train Cont	ATC-X13-IDW-003	4.9.2	IDW Schematic Cable Layout & D.B.	Design	
2	4	Train Cont	ATC-X13-IDW-004	4.9.2	IDW Alarm Circuits Sh. 1	Design	
2	4	Train Cont	ATC-X14-G-012	4.9.2	Double Line Track Plans Sh. 1	Design	
2	4	Train Cont	ATC-X14-G-013	4.9.2	Double Line Track Plans Sh. 2	Design	
2	4	Train Cont	ATC-X14-G-014	4.9.2	Double Line Track Plans Sh. 3	Design	
2	4	Train Cont	ATC-X14-I-001	4.9.2	Route & Locking Chart Sh. 1	Design	
2	4	Train Cont	ATC-X14-IDW-003	4.9.2	IDW Schematic Cable Layout & D.B.	Design	
2	4	Train Cont	ATC-X14-IDW-004	4.9.2	IDW Alarm Circuits Sh. 1	Design	
2	4	Train Cont	ATC-X15-G-011	4.9.2	Double Line Track Plans - South - Far	Design	
2	4	Train Cont	ATC-X15-G-012	4.9.2	Double Line Track Plans - South - Near	Design	
2	4	Train Cont	ATC-X15-G-013	4.9.2	Double Line Track Plans - Center	Design	
2	4	Train Cont	ATC-X15-G-014	4.9.2	Double Line Track Plans - North	Design	
2	4	Train Cont	ATC-X15-I-001	4.9.2	Route & Locking Chart	Design	
2	4	Train Cont	ATC-X15-IDW-003	4.9.2	IDW Schematic Cable Layout & D.B.	Design	
2	4	Train Cont	ATC-X15-IDW-004	4.9.2	IDW Alarm Circuits Sh. 1	Design	
2	4	Train Cont	ATC-X16-G-011	4.9.2	Double Line Track Plans - South - Far	Design	
2	4	Train Cont	ATC-X16-G-012	4.9.2	Double Line Track Plans - South - Near	Design	
2	4	Train Cont	ATC-X16-G-013	4.9.2	Double Line Track Plans - Center	Design	
2	4	Train Cont	ATC-X16-G-014	4.9.2	Double Line Track Plans - North	Design	
2	4	Train Cont	ATC-X16-I-001	4.9.2	Route & Locking Chart	Design	
2	4	Train Cont	ATC-X17-G-011	4.9.2	Double Line Track Plans Sh. 1	Design	
2	4	Train Cont	ATC-X17-G-012	4.9.2	Double Line Track Plans Sh. 2	Design	
2	4	Train Cont	ATC-X17-G-013	4.9.2	Double Line Track Plans Sh. 3	Design	

LVL 1	LVL 2	Discipline	Dwg Group		Drawing Description	Drawing Type	Drawing Count by Group
WBS				SOW Para	DESCRIPTION		
						Design, Diag. or Standard	SOW No.
					TRAIN CONTROL		
2	4	Train Cont	ATC-X17-I-001	4.9.2	Route & Locking Chart Sh. 1	Design	
2	4	Train Cont	ATC-X15-IDW-003	4.9.2	IDW Schematic Cable Layout & D.B.	Design	
2	4	Train Cont	ATC-X15-IDW-004	4.9.2	IDW Alarm Circuits Sh. 1	Design	
2	4	Train Cont	ATC-X19-G-011	4.9.2	Double Line Track Plans - South - Far	Design	
2	4	Train Cont	ATC-X19-G-012	4.9.2	Double Line Track Plans - South - Near	Design	
2	4	Train Cont	ATC-X19-G-013	4.9.2	Double Line Track Plans - Center	Design	
2	4	Train Cont	ATC-X19-G-014	4.9.2	Double Line Track Plans - North	Design	
2	4	Train Cont	ATC-X19-IDW-003	4.9.2	IDW Schematic Cable Layout & D.B.	Design	
2	4	Train Cont	ATC-X19-IDW-004	4.9.2	IDW Alarm Circuits Sh. 1	Design	
2	4	Train Cont	ATC-X20-G-011	4.9.2	Double Line Track Plans - South - Far	Design	
2	4	Train Cont	ATC-X20-G-012	4.9.2	Double Line Track Plans -South - Near	Design	
2	4	Train Cont	ATC-X20G-013	4.9.2	Double Line Track Plans - Center	Design	
2	4	Train Cont	ATC-X20-G-014	4.9.2	Double Line Track Plans - North	Design	
2	4	Train Cont	ATC-X20-I-001	4.9.2	Route & Locking Chart Sh. 1	Design	
2	4	Train Cont	ATC-X20-I-005	4.9.2	Dispatcher's Control Panel Layout	Design	
2	4	Train Cont	ATC-X20-I-006	4.9.2	Wayside Pushbutton Panel Layouts	Design	
2	4	Train Cont	ATC-X20-IDW-003	4.9.2	IDW Schematic Cable Layout & D.B.	Design	
2	4	Train Cont	ATC-X20-IDW-004	4.9.2	IDW Alarm Circuits Sh. 1	Design	
2	4	Train Cont	ATC-X21-G-012	4.9.2	Double Line Track Plans - South	Design	
2	4	Train Cont	ATC-X21-G-013	4.9.2	Double Line Track Plans - Center	Design	
2	4	Train Cont	ATC-X21-G-014	4.9.2	Double Line Track Plans - North	Design	
2	4	Train Cont	ATC-X21-I-001	4.9.2	Route & Locking Chart	Design	
2	4	Train Cont	ATC-X21-IDW-003	4.9.2	IDW Schematic Cable Layout & D.B.	Design	
2	4	Train Cont	ATC-X21-IDW-004	4.9.2	IDW Alarm Circuits Sh. 1	Design	
2	4	Train Cont	TC-YD-AR-011	4.9.1	Typical Yard Snowmelter Control Case	Design	
2	4	Train Cont	ATC-X21-AR-011	4.9.2	Marker Signal Layouts	Design	
				4.9.2 Total			190
				Grand Total			355

LVL 1	LVL 2	Discipline	Dwg Group		Drawing Description	Drawing Type	Drawing Count by Group
WBS				SOW Para	DESCRIPTION		
						Design, Diag. or Standard	SOW No.
					TUNNELS		
					Design Drawings - Total		**159**
					4.4.1 Total		**159**
1	1	Tunnels	General Dwg - Tunnels	4.4.1	Cut & Cover Structure - General Notes	Design	19
1	1	Tunnels	General Dwg - Tunnels	4.4.1	Cut & Cover Structure - Abbreviations and Symbols	Design	
1	1	Tunnels	General Dwg - Tunnels	4.4.1	Cut & Cover - Single Box Details (DD-S-014)	Design	
1	1	Tunnels	General Dwg - Tunnels	4.4.1	Invert and Safety Walk Details (DD-S-028)	Design	
1	1	Tunnels	General Dwg - Tunnels	4.4.1	Lateral Pressure for the Design of Temporary Earth Retaining Structures (DD-S-063)	Design	
1	1	Tunnels	General Dwg - Tunnels	4.4.1	Flared Transtion for Tunnel Entrances (DD-S-064)	Design	
1	1	Tunnels	General Dwg - Tunnels	4.4.1	Taped Slot Transtion for Tunnel or Box Section Entrance (DD-S-065)	Design	
1	1	Tunnels	General Dwg - Tunnels	4.4.1	Type 2 Floating Slab Details - 1 (DD-S-115)	DD Dwg	
1	1	Tunnels	General Dwg - Tunnels	4.4.1	Type 2 Floating Slab Details - 2 (DD-S-116)	DD Dwg	
1	1	Tunnels	General Dwg - Tunnels	4.4.1	Type 2 Floating Slab Details - 3 (DD-S-117)	DD Dwg	
1	1	Tunnels	General Dwg - Tunnels	4.4.1	Type 1 & Type 2 Floating Slab Details (DD-S-118)	DD Dwg	
1	1	Tunnels	General Dwg - Tunnels	4.4.1	Floating Slab Manhole Details (DD-S-119)	DD Dwg	
1	1	Tunnels	General Dwg - Tunnels	4.4.1	Typical Details of Expansion Joints (DD-S-120)	DD Dwg	
1	1	Tunnels	General Dwg - Tunnels	4.4.1	Waterproofing Details (DD-S-129)	DD Dwg	
1	1	Tunnels	General Dwg - Tunnels	4.4.1	Cut & Cover Structure - PVC Waterproofing Details, Sheet 1 of 4 (DD-S-130)	DD Dwg	
1	1	Tunnels	General Dwg - Tunnels	4.4.1	Cut & Cover Structure - PVC Waterproofing Details, Sheet 2 of 4 (DD-S-131)	DD Dwg	
1	1	Tunnels	General Dwg - Tunnels	4.4.1	Cut & Cover Structure - PVC Waterproofing Details, Sheet 3 of 4 (DD-S-132)	DD Dwg	
1	1	Tunnels	General Dwg - Tunnels	4.4.1	Cut & Cover Structure - PVC Waterproofing Details, Sheet 4 of 4 (DD-S-133)	DD Dwg	
1	1	Tunnels	General Dwg - Tunnels	4.4.1	Typical Aerial Structural / Tunnel Cable Trough (DD-S-168)	DD Dwg	
1	1	Tunnels	Tunnel Design - Tysons Crnr	4.4.1	Tysons Corner Cut & Cover before TBM Tunnel - Plan & Elevation - 1	Design	16
1	1	Tunnels	Tunnel Design - Tysons Crnr	4.4.1	Tysons Corner Cut & Cover before TBM Tunnel - Plan & Elevation - 2	Design	
1	1	Tunnels	Tunnel Design - Tysons Crnr	4.4.1	Tysons Corner Cut & Cover before TBM Tunnel - Sections, Reinforcement Details 1	Design	
1	1	Tunnels	Tunnel Design - Tysons Crnr	4.4.1	Tysons Corner Cut & Cover before TBM Tunnel - Sections, Reinforcement Details 2	Design	
1	1	Tunnels	Tunnel Design - Tysons Crnr	4.4.1	Tysons Corner Cut & Cover before TBM Tunnel - Invert Details	Design	
1	1	Tunnels	Tunnel Design - Tysons Crnr	4.4.1	Tysons Corner Cut & Cover before TBM Tunnel - East Portal - Plan, Sections & Details	Design	
1	1	Tunnels	Tunnel Design - Tysons Crnr	4.4.1	Tysons Corner Cut & Cover before TBM Tunnel - West Portal - Plan, Sections & Details	Design	
1	1	Tunnels	Tunnel Design - Tysons Crnr	4.4.1	Tysons Corner Cut & Cover before TBM Tunnel - Walkway/Cableway Details	Design	
1	1	Tunnels	Tunnel Design - Tysons Crnr	4.4.1	Tysons Corner Cut & Cover after TBM Tunnel - Plan & Elevation - 1	Design	
1	1	Tunnels	Tunnel Design - Tysons Crnr	4.4.1	Tysons Corner Cut & Cover after TBM Tunnel - Plan & Elevation - 2	Design	
1	1	Tunnels	Tunnel Design - Tysons Crnr	4.4.1	Tysons Corner Cut & Cover after TBM Tunnel - Plan & Elevation - 3	Design	
1	1	Tunnels	Tunnel Design - Tysons Crnr	4.4.1	Tysons Corner Cut & Cover after TBM Tunnel - Plan & Elevation - 4	Design	
1	1	Tunnels	Tunnel Design - Tysons Crnr	4.4.1	Tysons Corner Cut & Cover after TBM Tunnel - Sections, Reinforcement Details 2	Design	
1	1	Tunnels	Tunnel Design - Tysons Crnr	4.4.1	Tysons Corner Cut & Cover after TBM Tunnel - East Portal - Plan, Sections & Details	Design	
1	1	Tunnels	Tunnel Design - Tysons Crnr	4.4.1	Tysons Corner Cut & Cover after TBM Tunnel - West Portal - Plan, Sections & Details	Design	
1	1	Tunnels	Tunnel Design - Tysons Crnr	4.4.1	Tysons Corner Cut & Cover after TBM Tunnel - Walkway/Cableway Details	Design	
1	1	Tunnels	Tunnel Design - WFC	4.4.1	WFC Yard - Cut & Cover Structure - Plan & Elevation 1	Design	6
1	1	Tunnels	Tunnel Design - WFC	4.4.1	WFC Yard - Cut & Cover Structure - Plan & Elevation 2	Design	
1	1	Tunnels	Tunnel Design - WFC	4.4.1	WFC Yard - Cut & Cover Structure - Invert Details	Design	
1	1	Tunnels	Tunnel Design - WFC	4.4.1	WFC Yard - Cut & Cover Structure - East Portal - Plan, Sections & Details	Design	
1	1	Tunnels	Tunnel Design - WFC	4.4.1	WFC Yard - Cut & Cover Structure - West Portal - Plan, Sections & Details	Design	
1	1	Tunnels	Tunnel Design - WFC	4.4.1	WFC Yard - Cut & Cover Structure - Walkway/Cableway Details	Design	
1	3	Tunnels	TBM Tunnel	4.4.1	TBM Tunnel - General Notes	Design	42
1	3	Tunnels	TBM Tunnel	4.4.1	TBM Tunnel - Abbreviations and Symbols	Design	
1	3	Tunnels	TBM Tunnel	4.4.1	Invert and Safety Walk Details (DD-S-028)	DD Dwg	
1	3	Tunnels	TBM Tunnel	4.4.1	Flared Transtion for Tunnel Entrances (DD-S-064)	DD Dwg	
1	3	Tunnels	TBM Tunnel	4.4.1	Taped Slot Transtion for Tunnel or Box Section Entrance (DD-S-065)	DD Dwg	
1	3	Tunnels	TBM Tunnel	4.4.1	Type 2 Floating Slab Details - 1 (DD-S-115)	DD Dwg	
1	3	Tunnels	TBM Tunnel	4.4.1	Type 2 Floating Slab Details - 2 (DD-S-116)	DD Dwg	
1	3	Tunnels	TBM Tunnel	4.4.1	Type 2 Floating Slab Details - 3 (DD-S-117)	DD Dwg	
1	3	Tunnels	TBM Tunnel	4.4.1	Type 1 & Type 2 Floating Slab Details (DD-S-118)	DD Dwg	
1	3	Tunnels	TBM Tunnel	4.4.1	Floating Slab Manhole Details (DD-S-119)	DD Dwg	
1	3	Tunnels	TBM Tunnel	4.4.1	Typical Details of Expansion Joints (DD-S-120)	DD Dwg	
1	3	Tunnels	TBM Tunnel	4.4.1	Waterproofing Details (DD-S-129)	DD Dwg	
1	3	Tunnels	TBM Tunnel	4.4.1	Precast Conc. Tunnel Lining (4 ft Rings) - Sheet 1 of 5 (DD-S-141)	DD Dwg	
1	3	Tunnels	TBM Tunnel	4.4.1	Precast Conc. Tunnel Lining (4 ft Rings) - Sheet 2 of 5 (DD-S-142)	DD Dwg	
1	3	Tunnels	TBM Tunnel	4.4.1	Precast Conc. Tunnel Lining (4 ft Rings) - Sheet 3 of 5 (DD-S-143)	DD Dwg	
1	3	Tunnels	TBM Tunnel	4.4.1	Precast Conc. Tunnel Lining (4 ft Rings) - Sheet 4 of 5 (DD-S-144)	DD Dwg	
1	3	Tunnels	TBM Tunnel	4.4.1	Precast Conc. Tunnel Lining (4 ft Rings) - Details at Cross Adit - Sheet 5 of 5 (DD-S-145)	DD Dwg	
1	3	Tunnels	TBM Tunnel	4.4.1	Typical Aerial Structural / Tunnel Cable Trough (DD-S-168)	DD Dwg	
1	3	Tunnels	TBM Tunnel	4.4.1	Tysons Corner TBM Tunnel - Plan & Elevation - 1	Design	
1	3	Tunnels	TBM Tunnel	4.4.1	Tysons Corner TBM Tunnel - Plan & Elevation - 2	Design	
1	3	Tunnels	TBM Tunnel	4.4.1	Tysons Corner TBM Tunnel - Plan & Elevation - 3	Design	
1	3	Tunnels	TBM Tunnel	4.4.1	Tysons Corner TBM Tunnel - Plan & Elevation - 4	Design	
1	3	Tunnels	TBM Tunnel	4.4.1	Tysons Corner TBM Tunnel - Plan & Elevation - 5	Design	
1	3	Tunnels	TBM Tunnel	4.4.1	Tysons Corner TBM Tunnel - Plan & Elevation - 6	Design	
1	3	Tunnels	TBM Tunnel	4.4.1	Tysons Corner TBM Tunnel - Plan & Elevation - 7	Design	
1	3	Tunnels	TBM Tunnel	4.4.1	Tysons Corner TBM Tunnel - Plan & Elevation - 8	Design	
1	3	Tunnels	TBM Tunnel	4.4.1	Tysons Corner TBM Tunnel - Plan & Elevation - 9	Design	
1	3	Tunnels	TBM Tunnel	4.4.1	Tysons Corner TBM Tunnel - Precast Conc. Tunnel Lining Dimensions - 1	Design	
1	3	Tunnels	TBM Tunnel	4.4.1	Tysons Corner TBM Tunnel - Precast Conc. Tunnel Lining Dimensions - 2	Design	
1	3	Tunnels	TBM Tunnel	4.4.1	Tysons Corner TBM Tunnel - Precast Conc. Tunnel Lining Dimensions - 3	Design	

LVL 1	LVL 2	Discipline	Dwg Group		Drawing Description	Drawing Type	Drawing Count by Group
WBS				SOW Para	DESCRIPTION		
						Design, Diag. or Standard	SOW No.
					TUNNELS		
1	3	Tunnels	TBM Tunnel	4.4.1	Tysons Corner TBM Tunnel - Precast Conc. Tunnel Lining Dimensions - 4	Design	
1	3	Tunnels	TBM Tunnel	4.4.1	Tysons Corner TBM Tunnel - Precast Conc. Tunnel Lining Joints and Details - 1	Design	
1	3	Tunnels	TBM Tunnel	4.4.1	Tysons Corner TBM Tunnel - Precast Conc. Tunnel Lining Joints and Details - 2	Design	
1	3	Tunnels	TBM Tunnel	4.4.1	Tysons Corner TBM Tunnel - East Portal - Plan - Sections and Details	Design	
1	3	Tunnels	TBM Tunnel	4.4.1	Tysons Corner TBM Tunnel - West Portal - Plan - Sections and Details	Design	
1	3	Tunnels	TBM Tunnel	4.4.1	Tysons Corner TBM Tunnel - Cross Passage - General Arrangement	Design	
1	3	Tunnels	TBM Tunnel	4.4.1	Tysons Corner TBM Tunnel - Cross Passage - Plan and Sections	Design	
1	3	Tunnels	TBM Tunnel	4.4.1	Tysons Corner TBM Tunnel - Emergency Exit - General Arrangement	Design	
1	3	Tunnels	TBM Tunnel	4.4.1	Tysons Corner TBM Tunnel - Emergency Exit - Plan and Sections	Design	
1	3	Tunnels	TBM Tunnel	4.4.1	Tysons Corner TBM Support of Existing Structures - 1	Design	
1	3	Tunnels	TBM Tunnel	4.4.1	Tysons Corner TBM Support of Existing Structures - 2	Design	
1	3	Tunnels	TBM Tunnel	4.4.1	Tysons Corner TBM Temporary Street Decking	Design	
2	3	Tunnels	General Drawings	4.4.1	Cut & Cover Structure - General Notes	Design	19
2	3	Tunnels	General Drawings	4.4.1	Cut & Cover Structure - Abbreviations and Symbols	Design	
2	3	Tunnels	General Drawings	4.4.1	Cut & Cover - Single Box Details (DD-S-014)	DD Dwg	
2	3	Tunnels	General Drawings	4.4.1	Invert and Safety Walk Details (DD-S-028)	DD Dwg	
2	3	Tunnels	General Drawings	4.4.1	Lateral Pressure for the Design of Temporary Earth Retaining Structures (DD-S-063)	DD Dwg	
2	3	Tunnels	General Drawings	4.4.1	Flared Transtion for Tunnel Entrances (DD-S-064)	DD Dwg	
2	3	Tunnels	General Drawings	4.4.1	Taped Slot Transtion for Tunnel or Box Section Entrance (DD-S-065)	DD Dwg	
2	3	Tunnels	General Drawings	4.4.1	Type 2 Floating Slab Details - 1 (DD-S-115)	DD Dwg	
2	3	Tunnels	General Drawings	4.4.1	Type 2 Floating Slab Details - 2 (DD-S-116)	DD Dwg	
2	3	Tunnels	General Drawings	4.4.1	Type 2 Floating Slab Details - 3 (DD-S-117)	DD Dwg	
2	3	Tunnels	General Drawings	4.4.1	Type 1 & Type 2 Floating Slab Details (DD-S-118)	DD Dwg	
2	3	Tunnels	General Drawings	4.4.1	Floating Slab Manhole Details (DD-S-119)	DD Dwg	
2	3	Tunnels	General Drawings	4.4.1	Typical Details of Expansion Joints (DD-S-120)	DD Dwg	
2	3	Tunnels	General Drawings	4.4.1	Waterproofing Details (DD-S-129)	DD Dwg	
2	3	Tunnels	General Drawings	4.4.1	Cut & Cover Structure - PVC Waterproofing Details, Sheet 1 of 4 (DD-S-130)	DD Dwg	
2	3	Tunnels	General Drawings	4.4.1	Cut & Cover Structure - PVC Waterproofing Details, Sheet 2 of 4 (DD-S-131)	DD Dwg	
2	3	Tunnels	General Drawings	4.4.1	Cut & Cover Structure - PVC Waterproofing Details, Sheet 3 of 4 (DD-S-132)	DD Dwg	
2	3	Tunnels	General Drawings	4.4.1	Cut & Cover Structure - PVC Waterproofing Details, Sheet 4 of 4 (DD-S-133)	DD Dwg	
2	3	Tunnels	General Drawings	4.4.1	Typical Aerial Structural / Tunnel Cable Trough (DD-S-168)	DD Dwg	
2	3	Tunnels	Dulles Airport Station	4.4.1	Dulles Airport C&C Tunnel - Single Box - Slab Plan & Elevation - 1	Design	57
2	3	Tunnels	Dulles Airport Station	4.4.1	Dulles Airport C&C Tunnel - Single Box - Slab Plan & Elevation - 2	Design	
2	3	Tunnels	Dulles Airport Station	4.4.1	Dulles Airport C&C Tunnel - Single Box - Slab Plan & Elevation - 3	Design	
2	3	Tunnels	Dulles Airport Station	4.4.1	Dulles Airport C&C Tunnel - Single Box - Slab Plan & Elevation - 4	Design	
2	3	Tunnels	Dulles Airport Station	4.4.1	Dulles Airport C&C Tunnel - Single Box - Slab Plan & Elevation - 5	Design	
2	3	Tunnels	Dulles Airport Station	4.4.1	Dulles Airport C&C Tunnel - Single Box - Slab Plan & Elevation - 6	Design	
2	3	Tunnels	Dulles Airport Station	4.4.1	Dulles Airport C&C Tunnel - Single Box - Sections Reinforcement Details 1	Design	
2	3	Tunnels	Dulles Airport Station	4.4.1	Dulles Airport C&C Tunnel - Double Box - Slab Plan & Elevation - 1	Design	
2	3	Tunnels	Dulles Airport Station	4.4.1	Dulles Airport C&C Tunnel - Double Box - Slab Plan & Elevation - 2	Design	
2	3	Tunnels	Dulles Airport Station	4.4.1	Dulles Airport C&C Tunnel - Double Box - Slab Plan & Elevation - 3	Design	
2	3	Tunnels	Dulles Airport Station	4.4.1	Dulles Airport C&C Tunnel - Double Box - Slab Plan & Elevation - 4	Design	
2	3	Tunnels	Dulles Airport Station	4.4.1	Dulles Airport C&C Tunnel - Double Box - Slab Plan & Elevation - 5	Design	
2	3	Tunnels	Dulles Airport Station	4.4.1	Dulles Airport C&C Tunnel - Double Box - Slab Plan & Elevation - 6	Design	
2	3	Tunnels	Dulles Airport Station	4.4.1	Dulles Airport C&C Tunnel - Double Box - Slab Plan & Elevation - 7	Design	
2	3	Tunnels	Dulles Airport Station	4.4.1	Dulles Airport C&C Tunnel - Double Box - Sections Reinforcement Details 1	Design	
2	3	Tunnels	Dulles Airport Station	4.4.1	Dulles Airport C&C Tunnel - Triple Box - Slab Plan & Elevation - 1	Design	
2	3	Tunnels	Dulles Airport Station	4.4.1	Dulles Airport C&C Tunnel - Triple Box - Slab Plan & Elevation - 2	Design	
2	3	Tunnels	Dulles Airport Station	4.4.1	Dulles Airport C&C Tunnel - Triple Box - Slab Plan & Elevation - 3	Design	
2	3	Tunnels	Dulles Airport Station	4.4.1	Dulles Airport C&C Tunnel - Triple Box - Slab Plan & Elevation - 4	Design	
2	3	Tunnels	Dulles Airport Station	4.4.1	Dulles Airport C&C Tunnel - Triple Box - Sections Reinforcement Details 1	Design	
2	3	Tunnels	Dulles Airport Station	4.4.1	Dulles Airport C&C Tunnel - East Portal - Plan, Sections & Details	Design	
2	3	Tunnels	Dulles Airport Station	4.4.1	Dulles Airport C&C Tunnel - West Portal - Plan, Sections & Details	Design	
2	3	Tunnels	Dulles Airport Station	4.4.1	Dulles Airport C&C Tunnel - Walkway/Cableway Details	Design	
2	3	Tunnels	Dulles Airport Station	4.4.1	Dulles Airport Boat Section - Slab Plan & Elevation - 1	Design	
2	3	Tunnels	Dulles Airport Station	4.4.1	Dulles Airport Boat Section - Slab Plan & Elevation - 2	Design	
2	3	Tunnels	Dulles Airport Station	4.4.1	Dulles Airport Boat Section - Slab Plan & Elevation - 3	Design	
2	3	Tunnels	Dulles Airport Station	4.4.1	Dulles Airport Boat Section - Sections Reinforcement Details	Design	
2	3	Tunnels	Dulles Airport Station	4.4.1	Dulles Airport Boat Section - Slab Plan & Elevation - 1	Design	
2	3	Tunnels	Dulles Airport Station	4.4.1	Dulles Airport Boat Section - Slab Plan & Elevation - 2	Design	
2	3	Tunnels	Dulles Airport Station	4.4.1	Dulles Airport Boat Section - Sections Reinforcement Details	Design	
2	3	Tunnels	Dulles Airport Station	4.4.1	Cut & Cover Structure - General Notes	Design	
2	3	Tunnels	Dulles Airport Station	4.4.1	Cut & Cover Structure - Abbreviations and Symbols	Design	
2	3	Tunnels	Dulles Airport Station	4.4.1	Invert and Safety Walk Details (DD-S-028)	DD Dwg	
2	3	Tunnels	Dulles Airport Station	4.4.1	Soft Ground NATM Tunnel Cast-In-Place Concrete Lining Details (DD-S-121)	DD Dwg	
2	3	Tunnels	Dulles Airport Station	4.4.1	Type 2 Floating Slab Details - 1 (DD-S-115)	DD Dwg	
2	3	Tunnels	Dulles Airport Station	4.4.1	Type 2 Floating Slab Details - 2 (DD-S-116)	DD Dwg	
2	3	Tunnels	Dulles Airport Station	4.4.1	Type 2 Floating Slab Details - 3 (DD-S-117)	DD Dwg	
2	3	Tunnels	Dulles Airport Station	4.4.1	Type 1 & Type 2 Floating Slab Details (DD-S-118)	DD Dwg	
2	3	Tunnels	Dulles Airport Station	4.4.1	Floating Slab Manhole Details (DD-S-119)	DD Dwg	
2	3	Tunnels	Dulles Airport Station	4.4.1	Typical Details of Expansion Joints (DD-S-120)	DD Dwg	
2	3	Tunnels	Dulles Airport Station	4.4.1	Waterproofing Details (DD-S-129)	DD Dwg	
2	3	Tunnels	Dulles Airport Station	4.4.1	Typical Aerial Structural / Tunnel Cable Trough (DD-S-168)	DD Dwg	
2	3	Tunnels	Dulles Airport Station	4.4.1	Dulles Airport NATM Tunnel - Plan & Elevation - 1	Design	
2	3	Tunnels	Dulles Airport Station	4.4.1	Dulles Airport NATM Tunnel - Plan & Elevation - 2	Design	

LVL 1	LVL 2	Discipline	Dwg Group		Drawing Description	Drawing Type	Drawing Count by Group
WBS				SOW Para	DESCRIPTION		
						Design, Diag. or Standard	SOW No.
					TUNNELS		
2	3	Tunnels	Dulles Airport Station	4.4.1	Dulles Airport NATM Tunnel - Plan & Elevation - 3	Design	
2	3	Tunnels	Dulles Airport Station	4.4.1	Dulles Airport NATM Tunnel - Plan & Elevation - 4	Design	
2	3	Tunnels	Dulles Airport Station	4.4.1	Dulles Airport NATM Tunnel - Plan & Elevation - 5	Design	
2	3	Tunnels	Dulles Airport Station	4.4.1	Dulles Airport NATM Tunnel - Plan & Elevation - 6	Design	
2	3	Tunnels	Dulles Airport Station	4.4.1	Dulles Airport NATM Tunnel - Sections - 1	Design	
2	3	Tunnels	Dulles Airport Station	4.4.1	Dulles Airport NATM Tunnel - Sections - 2	Design	
2	3	Tunnels	Dulles Airport Station	4.4.1	Dulles Airport NATM Tunnel - Sections - 3	Design	
2	3	Tunnels	Dulles Airport Station	4.4.1	Dulles Airport NATM Tunnel - Shotcrete Details - 1	Design	
2	3	Tunnels	Dulles Airport Station	4.4.1	Dulles Airport NATM Tunnel - Shotcrete Details - 2	Design	
2	3	Tunnels	Dulles Airport Station	4.4.1	Dulles Airport NATM Tunnel - Shotcrete Details - 3	Design	
2	3	Tunnels	Dulles Airport Station	4.4.1	Dulles Airport NATM Tunnel - Lining Reinforcement	Design	
2	3	Tunnels	Dulles Airport Station	4.4.1	Dulles Airport NATM Tunnel - Walkway/Cableway	Design	
2	3	Tunnels	Dulles Airport Station	4.4.1	Dulles Airport NATM Tunnel - Misc. Steel	Design	
				4.4.1 Total			**159**
				Grand Total			**159**

Attachment C

Exclusions, Assumptions and Clarifications

The section numbers used below correspond to the section numbers and titles in the preceding Scope of Phase 1 and Phase 2 Preliminary Engineering (PE) Work. These Exclusions, Assumptions and Clarifications delineate the responsibilities of Dulles Transit Partners (DTP) in providing preliminary engineering services on a fixed price basis. The Scope of Work (SOW) does not include revisions to drawings or other documents developed during Preliminary Engineering that are due to changes in applicable codes or standards.

1.0 General

Exclusions

- Per discussions with WMATA (reference meeting dated 7/7/03), the Parking Garage at the Tyson's West Station has been removed from the LPA. Design activities associated with this Parking Garage are not included in the Scope of Work.
- The PE Scope of Work does not include designs or capital improvements to the New Carrollton Service and Inspection facilities.

Assumptions and Clarifications

- The Fixed Price for Preliminary Engineering Work and the Schedule including Milestone Dates assume that the Notice to Proceed for Preliminary Engineering authorizes DTP to commence Preliminary Engineering Work for both Phase 1 and Phase 2, as specified in Section 4.2 of the Comprehensive Agreement.
- At NTP, WMATA and DRPT will identify those elements of the Revised LPA that have been modified from the DEIS. Additionally at NTP, WMATA and DRPT will identify those elements and technical issues of the Project that continue to be evaluated as part of the NEPA process. Work on the elements still being evaluated as part of NEPA will be deferred until formally adopted as part of the Project's Revised LPA.
- The PE Scope of Work assumes no rail vehicle engineering except for work specified in SOW Section 4.9.1
- The Drawing List included in Exhibit G-1 Attachment B to the CA was developed in coordination with WMATA and DRPT. These 3,725 drawings indicated as "PE Drawings" are the baseline for the level of effort required to satisfy the SOW.
- A previous version of The Drawing List included in Exhibit G-1 Attachment C to the CA dated 12-18-03 listed additional drawings that are not required to be included in the current PE Drawing List. The list was used during negotiations to determine the agreed upon number of drawings to perform the PE scope of work. This list shall be documented and included in the Summary Record of Negotiations.
- It is assumed that WMATA will provide requirements and/or technical direction for interface issues within a reasonable period of time to support the project schedule.

- Modifications required at the OCC, ACC, and ROCS are outside the PE Scope of Work, including processing of all data at the OCC, ACC, and ROCS to support system wide functionality and graphical displays.
- WMATA will provide revisions to design criteria for approved deviations.
- WMATA will provide bus operational analyses or interfaces, or interface requirements to accommodate bus operations at the Stations.
- The PE Scope of Work assumes no additional modifications to facilities (other than the additional bays to the existing West Falls Church Yard Maintenance building) that may result from operational analyses in support of Phase 1 PE Work.
- The PE Scope of Work assumes no relocation of the West Falls Church Yard car wash.
- WMATA will provide the necessary requirements and design specifications for shop equipment at the West Falls Church Yard and Y15.

2.7 Document Control

Assumptions and Clarifications

- InfoWorks (a Documentum based database) will be the document control system used to track PE records.
- Documents provided to the Consultant which were prepared prior to NTP will be retained in the Project Library Database in the native format received (i.e. hard copy or electronic).

4.1.1 Basis of Design

Assumptions and Clarifications

- For changes to the Project's basis of design resulting from the Supplemental Draft EIS or Final EIS, any effects on the PE Scope will be determined in accordance with the procedures outlined in the Comprehensive Agreement.

4.1.2 Project Phasing

Assumptions and Clarifications

- Consistent with the Construction Management Association of America (CMAA) definition of biddability, the packages for bidding as described in Section 4.1.2 of the PE scope of work shall be a set of bid documents that would reasonably allow a bidder to establish a competitive price to perform the work as defined in the bid documents.

4.2.1 Survey Controls and Alignment

Exclusions

- The PE Scope of Work does not include remapping of topography, except as specified in Section 4.2.1.

Assumptions and Clarifications

- WMATA will provide digital terrain model (DTM) files, topographic base mapping, control surveys, and aerial photographs for Consultant's use. Consultant will field check WMATA's topographic mapping for adequate coverage, completeness and accuracy.
- The Scope of Work includes field surveys to tie down parcels (property line surveys) to project survey controls and to initially resolve gaps and overlaps identified during compilation of available deeds of record for the affected properties.
- Horizontal and vertical control plans will be prepared at 1"=400' scale.

4.2.2 Right-of-Way

Assumptions and Clarifications

- Field surveys to tie down property parcels to project survey controls, as required to initially resolve gaps and overlaps, are included as part of Section 4.2.1 of the Scope of Work. The efforts will result in a partially completed survey worksheet that will support appraisals and the WMATA review process. Additional survey work necessary for property acquisition will be prepared as specified in the Development Scope of Work

- The Scope of Work includes a conceptual definition of temporary easements needed to support construction of Phase 2. The results will be documented in the Phase 2 PE Right of Way drawings.

- Title and deed research of affected properties is included in the Development Scope of Work.

4.2.3 Geotechnical

Exclusions

- The PE Scope of Work does not include storage of samples obtained during the field investigations after completion of laboratory testing and preparation of a geotechnical data report.
- The PE Scope of Work does not include the implementation of an instrumentation program.

Assumptions and Clarifications

- Property access (or rights of entry) required to perform the field investigations will be obtained as part of the Development Scope.
- DRPT and WMATA will assist in obtaining available soils testing information from the construction of the existing roadways and the Orange Line in the vicinity of the project.

4.2.4 Utilities

Exclusions

- The PE Scope of Work does not include Utility betterments.

Assumptions and Clarifications

- Composite Utility Plans will be provided at 1"=40' scale, showing existing utilities and defining proposed work. Proposed work may also be shown on details or enlarged plans, as necessary to define the work to be performed.
- Enlarged plans will be provided at 1"=20' or 1"=10' scale at key locations, and may include tables and profiles, as necessary.
- Storm drainage will be shown on composite utilities plans for reference only. Details of storm drainage pipes and structures will be provided on the Grading and Drainage drawings.
- Systems duct bank will be shown on composite utility plans in at-grade running track sections, with details provided as needed. Aerial and underground duct runs will be shown on structural drawings.

4.2.5 Grading, Drainage and Stormwater Management

Assumptions and Clarifications

- Grading and Drainage Plans will be provided at 1"=40' scale, showing the existing/proposed contours and drainage infrastructure. For Phase 1, plans will be prepared for the entire alignment. For Phase 2, plans will be prepared in areas of the stations, Yard Y-15, and typical locations along the alignment between stations as identified in the SOW Attachment **B** Drawing List.
- Grading and Drainage enlarged plans will be provided at 1"=20' or 1"=10' scale at key locations, and may include tables and profiles as necessary.

4.2.7 Traffic Analysis and Maintenance of Traffic

Assumptions and Clarifications

- Travel demand model and forecasts for use during PE will be provided by DRPT/WMATA.

4.2.8 Construction and Design-Build Coordination

Assumptions and Clarifications

a. The PE Scope of Work with respect to the Wolf Trap Station, as stated in Section 4.2.8.d, requires DTP to develop constructability concepts that include accommodations for this future station. Within the first 120 days after NTP, WMATA will provide DTP design requirements for the future station elements to be incorporated in the PE design, with the goal of minimizing future costs and impacts to the operating system.

4.2.10 Other Civil Engineering

Assumptions and Clarifications

- The results of the Phase 1 other civil engineering work will be used to establish cost estimates for Phase 2.

4.2.11 Noise and Vibration Analysis

Exclusions

- The PE Scope of Work does not include participation in meetings for community-based noise and vibration issues not identified in the DEIS.

4.4 Structural

Assumptions and Clarifications

Retaining Walls

- Retaining wall drawings will be completed to a point where an estimate of the structural elements needed for construction can be prepared for Phase 1. For Phase 2, tables or spreadsheets will be prepared for the tabulation of construction material quantities associated with the proposed retaining walls.

4.4.2 Stations and Facilities

Assumptions and Clarifications

- The Structural Preliminary Engineering for Phase 2 will be based on:
  - Utilization of the preliminary design and construction quantities of the Wiehle Avenue Station, the Dulles Airport Station, and the Rail Yard and Shop.

4.5 Architectural

Assumptions and Clarifications

- Paving plans will be provided for the station ground floor. Paving requirements for other floor levels will be noted in the floor plans.

4.6 Landscaping

Assumptions and Clarifications

- The results of Phase 1 landscaping design, and the master plans, will be used to develop cost estimates for similar elements of Phase 2.

4.10 Communications

Assumptions and Clarifications

- Station LAN/WAN Network is required to support communication to the Alternate OCC. Connectivity to the existing WMATA LAN/WAN will be addressed as part of the SOW.

4.11 Automatic Fare Collection (AFC)

Assumptions and Clarifications

- WMATA will define fare equipment quantities for each station.

4.14 Environmental

Exclusions

- The environmental work is excluded from the base SOW pricing and will be performed, as necessary, on a task order basis.

4.17 Cost Estimates

Assumptions and Clarifications

- The baseline Capital Cost Estimate will be the SDEIS Capital Cost estimate or the latest capital cost estimate made available to DTP within 30 days of NTP.

5.0 Review of the Preliminary Engineering Work Products

Assumptions and Clarifications

- At each Milestone Review Meeting, DRPT/WMATA will screen the external comments and classify them into mandatory for PE or for information only.

EXHIBIT G-2

PHASE 1 AND 2 PRELIMINARY ENGINEERING PRICING AND COMPENSATION

A. **CONTRACT AMOUNT:** As full compensation for the Preliminary Engineering Work to be performed by DTP, the Department shall pay to DTP a fixed price of $45,423,000 (“Fixed Price”). The Fixed Price shall be paid in accordance with Section 6.1. The Fixed Price shall be increased or decreased only by Change Order issued in accordance with Article 7.2 or by supplement or amendment to the Comprehensive Agreement.

B. **ITEMS INCLUDED IN THE FIXED PRICE:** DTP acknowledges and agrees that, subject to DTP’s rights under Article VII, the Fixed Price for performance of DTP’s obligations for Preliminary Engineering Work includes labor, overhead, subcontracts, taxes, profit, materials, supplies, equipment, communications, outside printing and reproductions, postage and couriers. The Fixed Price does not include application fees for Project permits, the cost of Project-specific insurance, or Project office costs which include office rental, utilities, telephone service, office furniture, computers/CADD stations, computer peripherals, printers, plotters and software, office supplies and office facility support, all of which shall be paid by the Department outside of the Fixed Price.

C. **SCHEDULE OF VALUES:** The Schedule of Values provided in Exhibit G-2 sets forth a breakdown of the Fixed Price showing amounts included for each principal category of the Scope of Work by Project Phase. The Schedule of Values shall be the basis for determining progress payments earned by DTP.

D. **MAXIMUM PAYMENT CURVE:** The cap on the aggregate amount of progress payments made by the Department to DTP for Preliminary Engineering Work at any specified time is set forth in the Maximum Payment Curve in Exhibit G-2. At no time shall DTP’s cumulative progress payments exceed the total expenditure permitted by the Maximum Payment Curve. The Maximum Payment Curve is subject to revision from time to time as appropriate to account for any changes in the Fixed Price.

E. **MOBILIZATION PAYMENT:** The Department shall pay DTP a mobilization payment of $2,800,000 (which is included in the $45,423,000 “Fixed Price”) for Preliminary Engineering Work as compensation for relocation expenses and temporary living and travel expenses.

F. **INVOICING:** Supporting documentation for Preliminary Engineering invoices will include a time-based schedule of values to be provided by DTP within 120-days of Notice-To-Proceed for Preliminary Engineering. For the time period before submittal of the time-based schedule of values, DTP will provide an interim time-based schedule of values

DULLES CORRIDOR RAPID TRANSIT PROJECT
PRELIMINARY ENGINEERING PROPOSAL
COST BREAKDOWN BY SOW SECTION

	SOW PARA	DISCIPLINE	PHASE1 COST	PHASE2 COST	TOTAL COST
	2.00.	S/T Project Management	$358,164	$234,795	$592,959
2.00.	**PROJECT MANAGEMENT Total**		**$358,164**	**$234,795**	**$592,959**
	2.01.	S/T Roles & Responsibilities	$14,248	$0	$14,248
2.01.	**ROLES & RESPONSIBILITIES Total**		**$14,248**	**$0**	**$14,248**
	2.03.	S/T Schedule for PE Services	$558,386	$443,835	$1,002,221
2.03.	**PE SCHEDULE Total**		**$558,386**	**$443,835**	**$1,002,221**
	2.04.	S/T Project Execution Plan	$92,993	$33,187	$126,180
2.04.	**PROJECT EXECUTION PLAN Total**		**$92,993**	**$33,187**	**$126,180**
	2.05.	S/T QA & QC	$240,862	$172,016	$412,879
2.05.	**QA / QC Total**		**$240,862**	**$172,016**	**$412,879**
	2.06.	S/T Consultant Coordination	$224,417	$162,259	$386,676
2.06.	**CONSULTANT COORDINATION Total**		**$224,417**	**$162,259**	**$386,676**
	2.07.	S/T Document Control	$483,220	$449,131	$932,351
2.07.	**DOCUMENT CONTROL Total**		**$483,220**	**$449,131**	**$932,351**
	2.08.	S/T Method of Payment / Type of Contract	$78,078	$54,302	$132,380
2.08.	**METHOD OF PAYMENT / CONTRACT TYPE Total**		**$78,078**	**$54,302**	**$132,380**
2 - PROJECT MANAGEMENT Total			**$2,050,367**	**$1,549,526**	**$3,599,894**
	3.00.	S/T Documents Provided to Consultant (Review)	$56,410	$0	$56,410
3.00.	**DOCUMENTS BY WMATA (Review) Total**		**$56,410**	**$0**	**$56,410**
3 - DOCUMENTS PROVIDED BY WMATA (Review) Total			**$56,410**	**$0**	**$56,410**
	4.01.01	S/T Basis of PE Design	$58,353	$41,682	$100,035
	4.01.02	S/T Project Phasing	$161,477	$114,487	$275,964
	4.01.04	S/T Operational Considerations	$454,514	$257,957	$712,470
	4.01.05	S/T Standards & Design Criteria Review	$61,349	$48,114	$109,464
	4.01.06	S/T Specs	$1,448,164	$723,940	$2,172,104
4.01.	**TECH SERVICES - GENERAL Total**		**$2,183,856**	**$1,186,180**	**$3,370,036**
	4.02.01	S/T Survey Controls & Alignment	$426,399	$530,463	$956,862
	4.02.02	S/T ROW	$425,049	$242,173	$667,222
	4.02.03	S/T Geotechnical	$2,471,241	$1,200,802	$3,672,043
	4.02.04	S/T Utilities	$903,172	$679,778	$1,582,950
	4.02.05	S/T Stormwater Mgmt & Drainage Design	$645,716	$435,765	$1,081,481
	4.02.06	S/T Roadway Align, Access Rds, Parking Lots	$300,033	$201,618	$501,651
	4.02.07	S/T Traffic Analysis & Maintenance of Traffic	$541,723	$388,869	$930,592
	4.02.08	S/T Construction & Design/Build Coordination	$637,038	$453,698	$1,090,736
	4.02.09	S/T Track Alignment Plan & Profile	$710,562	$723,263	$1,433,826
	4.02.10	S/T Other Civil Engrg	$356,461	$170,849	$527,310
	4.02.11	S/T Noise & Vibration Analysis	$171,035	$84,473	$255,507
4.02.	**CIVIL Total**		**$7,588,429**	**$5,111,751**	**$12,700,180**
	4.03.	S/T Trackwork Design	$200,620	$209,641	$410,261
4.03.	**TRACKWORK Total**		**$200,620**	**$209,641**	**$410,261**
	4.04.01	S/T Structural - Metrorail Line	$2,320,242	$1,365,404	$3,685,646
	4.04.02	S/T Structural - Stations & Facilities	$1,545,467	$1,304,682	$2,850,149
4.04.	**STRUCTURAL Total**		**$3,865,709**	**$2,670,086**	**$6,535,795**
	4.05.01	S/T Architectural Design Consultant	$154,208	$0	$154,208
	4.05.02	S/T Design Concept Development & Presentations	$1,462,391	$64,291	$1,526,682
	4.05.03	S/T Fire/Life Safety Analysis	$229,538	$159,697	$389,235
	4.05.04	S/T Accessibility Compliance Report	$25,520	$27,224	$52,743
	4.05.05	S/T AIT Program	$14,032	$9,842	$23,875
	4.05.06	S/T Y&S Facilities Program	$1,121	$33,464	$34,585
	4.05.07	S/T Architectural PE Dwgs	$1,543,496	$1,378,585	$2,922,081
4.05.	**ARCHITECTURAL Total**		**$3,430,306**	**$1,673,102**	**$5,103,409**
	4.06.01	S/T Landscaping - Metrorail Line	$44,191	$21,368	$65,559
	4.06.02	S/T Landscaping - Stations & Facilities	$253,376	$106,993	$360,369
4.06.	**LANDSCAPING Total**		**$297,567**	**$128,361**	**$425,928**
	4.07.01	S/T Mechanical - Metrorail Line	$172,124	$100,023	$272,148
	4.07.02	S/T Mechanical - Stations & Facilities	$509,781	$301,985	$811,766
4.07.	**MECHANICAL Total**		**$681,906**	**$402,008**	**$1,083,914**
	4.08.01	S/T Elect/Traction Power - Metrorail Line	$709,979	$436,769	$1,146,749
	4.08.02	S/T Elect/Traction Power - Stations & Facilities	$531,099	$322,806	$853,904
4.08.	**ELECTRICAL / TRACTION POWER Total**		**$1,241,078**	**$759,575**	**$2,000,653**

DULLES CORRIDOR RAPID TRANSIT PROJECT
PRELIMINARY ENGINEERING PROPOSAL
COST BREAKDOWN BY SOW SECTION

	SOW PARA	DISCIPLINE	PHASE1 COST	PHASE2 COST	TOTAL COST
	4.09.01	**S/T ATC - Metrorail Line**	$780,729	$468,987	$1,249,716
	4.09.02	**S/T ATC - Stations & Facilities**	$448,187	$188,010	$636,197
4.09.	**AUTOMATIC TRAIN CONTROL Total**		**$1,228,916**	**$656,997**	**$1,885,913**
	4.10.01	**S/T Communications - Metrorail Line**	$211,803	$321,846	$533,648
	4.10.02	**S/T Communications - Stations & Facilities**	$222,221	$117,371	$339,592
4.10.	**COMMUNICATIONS Total**		**$434,024**	**$439,217**	**$873,241**
	4.11.01	**S/T Fare Collection - Stations & Facilities**	$13,205	$0	$13,205
4.11.	**AUTOMATIC FARE COLLECTION Total**		**$13,205**	**$0**	**$13,205**
	4.12.	**S/T Intelligent Transportation Systems**	$203,058	$31,983	$235,040
4.12.	**INTELLIGENT TRANSPORATION Total**		**$203,058**	**$31,983**	**$235,040**
	4.13.	**S/T Safety & Security**	$330,793	$258,550	$589,343
4.13.	**SAFETY & SECURITY Total**		**$330,793**	**$258,550**	**$589,343**
	4.14.	**S/T Environmental**	$0	$0	$0
	4.14.01	**S/T Contamination Analysis**	$0	$0	$0
	4.14.02	**S/T Air Quality**	$0	$0	$0
	4.14.03	**S/T Water Quality**	$0	$0	$0
	4.14.04	**S/T Wetlands, Fish/Wildlife & Habitats**	$0	$0	$0
	4.14.05	**S/T Cultural Resources**	$0	$0	$0
4.14.	**ENVIRONMENTAL Total**		**$0**	**$0**	**$0**
	4.15.	**S/T Permits**	$46,536	$32,995	$79,531
4.15.	**PERMITS Total**		**$46,536**	**$32,995**	**$79,531**
	4.16.	**S/T SPECIAL TASKS & STUDIES**	$50,000	$50,000	$100,000
4.16.	**SPECIAL TASKS & STUDIES**		**$50,000**	**$50,000**	**$100,000**
	4.17.	**S/T Cost Estimates**	$844,403	$614,568	$1,458,971
4.17.	**COST ESTIMATES Total**		**$844,403**	**$614,568**	**$1,458,971**
	4.18.	**S/T Master Project Schedule & D/B Implementation Sche**	$504,455	$370,706	$875,161
4.18.	**MASTER PROJECT SCHEDULE Total**		**$504,455**	**$370,706**	**$875,161**
	4.19.	**S/T Value Engineering**	$223,822	$89,298	$313,120
4.19.	**VALUE ENGINEERING Total**		**$223,822**	**$89,298**	**$313,120**
	4.20.	**S/T Risk Management**	$0	$0	$0
4.20.	**RISK MANAGEMENT Total**		**$0**	**$0**	**$0**
4 - TECHNICAL SERVICES Total			**$23,368,682**	**$14,685,018**	**$38,053,700**
	5.00.	**S/T Review of the PE Work Products**	$327,758	$280,716	$608,474
5.00.	**REVIEW PE WORK PRODUCTS Total**		**$327,758**	**$280,716**	**$608,474**
5 - REVIEW OF PE WORK Total			**$327,758**	**$280,716**	**$608,474**
	6.00.	**S/T Deliverables**	$170,783	$133,739	$304,522
6.00.	**DELIVERABLES Total**		**$170,783**	**$133,739**	**$304,522**
6 - DELIVERABLES Total			**$170,783**	**$133,739**	**$304,522**
TOTAL			**$25,974,000**	**$16,649,000**	**$42,623,000**
MOBILIZATION PAYMENTS			**$2,800,000**		**$2,800,000**
TOTAL PRELIMINARY ENGINEERING COST			**$28,774,000**	**$16,649,000**	**$45,423,000**

DCRTP MAXIMUM CASHFLOW
Total Cost = $45.423MM

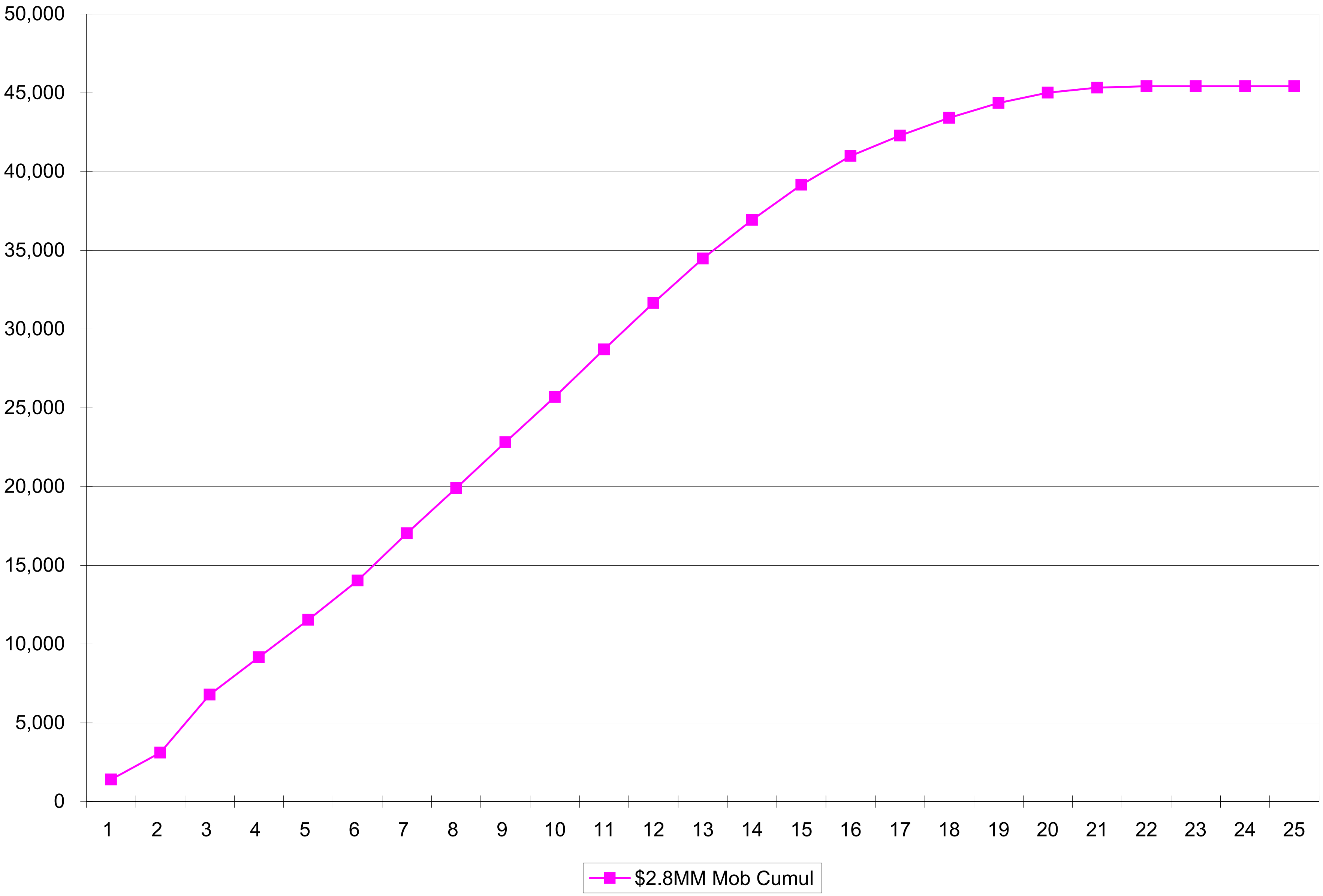


EXHIBIT H-1

SCOPE OF PHASE 2 DEVELOPMENT WORK

The Scope of Phase 2 Development Work will be added by Supplement.

EXHIBIT H-2

PHASE 2 DEVELOPMENT WORK PRICING AND COMPENSATION

The Phase 2 Development Work – Pricing and Compensation will be added by Supplement.

EXHIBIT I

OTHER GOVERNMENTAL ACTIONS AND REGULATORY APPROVALS

1. OTHER GOVERNMENTAL ACTIONS

Certain approvals or actions by other governmental agencies and local jurisdictions will be required to implement the Project. As the Project sponsor, the Department is responsible for coordinating with these agencies or jurisdictions to ensure these necessary approvals or actions are accomplished. The Department will support these agencies or jurisdictions in their efforts by providing necessary information about the Project, appearing at public meetings and hearings, or submitting formal applications. With the exception of the Final Environmental Impact Statement and Record of Decision, DTP will support the Department in these activities in accordance with the terms of the Development Scope of Work (Exhibit F-1).

Federal Transit Administration

- Approval of Final Environmental Impact Statement (includes Section 4(f) Evaluation, Clean Air Act Conformity Determination, and Section 106 Agreement)
- Issuance of Record of Decision for the Locally Preferred Alternative
- Approval to Enter Preliminary Engineering (Phase 1 and Phase 2)
- Approval to Enter Final Design and Construction (Phase 1 and Phase 2)
- Execution of Full Funding Grant Agreement (Phase 1 and Phase 2)

Virginia Art and Architectural Review Board (Department of General Services)

- Approval of Construction of Buildings (Stations) on State-Owned Land

Virginia Department of Historic Resources

- National Historic Preservation Act (Section 106 Agreement) Compliance

Metropolitan Washington Airports Authority

- Amendment of the Washington Dulles International Airport - *Airport Layout Plan* to include the Project's Locally Preferred Alternative. Submitted to and approved by the Federal Aviation Administration.
- Amendment of MWAA's Washington Dulles International Airport - *Airport Land Use Plan* to include the Project's Locally Preferred Alternative.

WMATA

- Amendment of the Metrorail *Adopted Regional System*

Fairfax County

- Comprehensive Plan Amendments
- Rezoning, Special Exceptions, Conditional Use Permits and/or Site Plan Reviews

Loudoun County

- Comprehensive Plan Amendments
- Rezoning, Special Exceptions, Conditional Use Permits and/or Site Plan Reviews

Town of Herndon

- Comprehensive Plan Amendments
- Rezoning, Special Exceptions, Conditional Use Permits and/or Site Plan Review
- Certificate of Approval for Buildings, Signs, or Structures within an Architectural Control District

2. REGULATORY APPROVALS (PERMITS)

As the Project sponsor, the Department is responsible for obtaining the following regulatory approvals if required to construct the Project. The Department will be the responsible public agency and these permits will be issued in its name. For these permits, DTP will prepare technical documentation or support application efforts for the Department in accordance with the terms of the Development Scope of Work (Exhibit F-1).

Airport Airspace – Federal Aviation Administration

- Obstruction Analysis and Airport Airspace Analysis. Requires Notice of Proposed Construction or Alteration and Notice of Actual Construction or Alteration

Air Quality – Virginia Department of Environmental Quality

- Minor/Major New Source Review/State Operating Permit or Letter of Exemption

Dam Safety – Virginia Department of Conservation and Recreation, Virginia Soil and Water Conservation Board

- Impounding Structure Construction Permit. Requires Design Report for the Construction or Alteration of Impounding Structures

Endangered Species – U.S. Fish and Wildlife Service

- Incidental Take Permit

Erosion and Sediment Control – Virginia Department of Conservation and Recreation

- Erosion and Sediment Control Plan Approval. Plan should adhere to local program requirements that are more stringent than Commonwealth regulations

Floodplain Management – Fairfax County

- Letter of Permission to Work in a Floodplain

Floodplain Management – Loudoun County

- Zoning Permit and/or Special Exception Permit

Floodplain Management – Town of Herndon

- Use Permit to Work in a Floodplain

Hazardous Materials – Virginia Department of Environmental Quality

- Applicable permits and approvals identified in the Phase II Environmental Site Assessments or necessary for unforeseeable contaminants discovered during land-disturbing activities.

Point Source Discharges into Surface Waters – Virginia Department of Environmental Quality

- Virginia Pollutant Discharge Elimination System Permit(s) for permanent discharges (excludes discharges from construction activities)

Stormwater Management – Virginia Department of Conservation and Recreation

- Stormwater Management Plan Approval. Plan should adhere to local Stormwater Management Program technical requirements.

Water Resources – U.S. Army Corps of Engineers, Virginia Department of Environmental Quality, and Virginia Marine Resource Commission

- Applicable Permits Acquired Under a Joint Permit Application:
  - U.S. COE State Program General Permit (SPGP-01)/Section 404 Permit
  - DEQ 401 Water Quality Certification; Virginia Water Protection Permit
  - VMRC Permit for Subaqueous Disturbance; Permit for Tidal Wetlands and Sand Dunes

EXHIBIT J

[NOT USED]

EXHIBIT K

APPROVED PRE-CA COSTS

The Approved Pre-CA Costs will be added by Supplement

EXHIBIT L

DISPUTE RESOLUTION BOARD AGREEMENT

PROJECT NAME: **Dulles Corridor Rapid Transit Project**

PROJECT LOCATION: **Fairfax and Loudoun Counties, Virginia**

I. PARTIES

The parties to this Agreement are:

A. The Virginia Department of Rail and Public Transportation

Authorized Representative ____________________________________

B. DTP:

Authorized Representative: ____________________________________

C. Dispute Resolution Board Members:

1.____

2.____

3. ____

II. PURPOSE

The Department and the DTP are now engaged in the Preliminary Engineering Work and Development Work of the Dulles Corridor Rapid Transit Project as described in Exhibits F and G of this Agreement.

The Comprehensive Agreement for this Project provides for the establishment and operation of a Dispute Resolution Board to assist in resolving Disputes as defined in this Agreement. The objective of the Board is to consider fairly and impartially the Disputes that are referred to it and to provide written non-binding recommendation(s) to the Department and the DTP to resolve these Disputes.

III. SCOPE OF DUTIES

Duties of Board members and the other parties to this Agreement shall be as stipulated in Section 13.4 of the Comprehensive Agreement that is incorporated by reference herein. Other duties that may prove necessary to facilitate a recommendation from the Board shall be mutually decided and agreed upon by all signatories to this Agreement.

IV. AREAS OF RESPONSIBILTIES

A. Board Responsibities

The Board is organized to facilitate the resolution of Disputes between the Department and the DTP arising under the terms and conditions of the Preliminary Engineering Work and Development Work. Board members shall not assign or subcontract any of the duties or services of this Agreement.

The Board shall encourage the parties involved in the Dispute to settle issues at the project level prior to arranging for a hearing before the Board.

Except for the duties and services required by this Agreement, the Board members shall refrain from giving any advice to either Party concerning the conduct of the work, the merits of a Dispute, the resolution of other non-Dispute problems or other Project-related issues.

B. DTP Responsibilities

Except for its participation in the Board activities as provided for in Section 13.4 of the Comprehensive Agreement, the DTP shall not solicit advice or consultation from the Board or its members on matters dealing with the prosecution, conduct, or resolution of Disputes or other Project-related issues.

The DTP may furnish to each Board member one copy of documents relative to the Comprehensive Agreement, other than those furnished by the Department, which are necessary for the performance of the Board to its stated purpose and duties. DTP shall furnish to each Board member one copy of the approved plans, when available.

C. Department Responsibilities

Except for its participation in the Board’s activities as provided for in Section 13.4 of the Comprehensive Agreement, the Department shall not solicit advice or consultation from the Board or its members on matters dealing with the prosecution, conduct, or resolution of Disputes or other Project-related issues.

The Department shall furnish each Board member one copy of all contract documents, including but not limited to: progress schedules and updates including the most recent approved CPM Schedule, Schedule of Values, weekly progress reports provided in accordance with the Comprehensive Agreement and the Preliminary Engineering Work and Development Work, change orders and any other documents necessary for the Board to perform its stated purpose and duties other than documents required to be submitted by DTP.

The Department will, in cooperation with the DTP, coordinate the operations of the Board. The Department will arrange for or provide conference facilities at or near the project site and provide secretarial and copying services.

V. TERMINATION OF BOARD MEMBER SERVICES

Board members may withdraw from the Board by providing not less than thirty (30) calendar days written notice prior to the effective date of termination. Board members may be terminated for any reason only by their original nominator. The Department and the DTP must agree to terminate the services of the third member.

If it becomes necessary to replace a member of the Board, the replacement member shall be nominated and approved in the same manner as the original member. Once the need for a replacement member is determined, the nomination and approval procedures shall begin immediately

VI. LEGAL RELATIONSHIPS

The Parties acknowledge and agree that the Dispute Resolution Board members are serving in a non-binding, advisory capacity. Each Board member, in the performance of his or her duties on the Board, is acting independently and is not an employee or agent or either the Department or DTP. To that end, each member shall carry insurance necessary for the performance of their duties while serving on the Board. The cost of such insurance shall be a part of the hourly or daily fee agreed to.

By signing this Agreement all signatories agree to the respective duties and obligations stated herein.

The Parties agree not subpoena or otherwise seek discovery from Board members, including their notes, transcripts of Board meetings or hearings, any other documents originated by the Board or presented by either Party, and not otherwise part of the normal contract documentation, for any subsequent administrative or judicial proceeding between the Parties or any other entity, regardless of tier, involved in the prosecution of the work.

VII. PAYMENT FOR SERVICES

The Department and DTP shall share equally (50/50 split) in the cost for Board members services and expenses for Board meetings and hearings. Any amounts due and owing by DTP and not paid may be paid by Department in its sole discretion and offset against amounts due DTP by Department under the Agreement.

Payment for services of the Department/WMATA appointed and DTP appointed members of the Board shall be at the hourly or daily rates agreed to between the

Department and DTP and their respectively appointed Board member. Payment for services rendered by the third member of the Board shall be made at the rates agreed to among the Department, DTP, and the third member. The Department, the Contractor, and the third member shall mutually agree upon changes to the billing rates of the third member.

Changes in the billing rates are subject to approval between the Department and DTP and the respective and mutually appointed members.

The first two members appointed to the Board shall be reimbursed for the time and expense associated in the selection of the third member.

Direct and non-fee expenses shall be reimbursed at the actual cost to the Board member, unless such costs are covered by the State per diem charges, in which case the State guidelines shall govern. Non-fee expenses may include, but are not limited to, automobile mileage or rental, parking fees, travel expense from the members' point of departure to the initial point of arrival, food and lodging, printing, long distance telephone calls, postage and courier delivery. Billing for these expenses shall include a detailed listing of items or charges supported by copies of the original bills, receipts, invoices, or expense accounts.

If the Board requests special services such as accounting or data research, both DTP and the Department must agree prior to the service being solicited and the cost will be divided as mutually agreed upon.

For Board meetings, each Board member shall submit to the Department an invoice for services rendered and associated with costs within 10 days after any scheduled meeting during the progress of the work. These invoices shall be in a format approved by the Department accompanied by a general description of the activities performed during that period.

For Board hearings, the Board shall submit an invoice of its fees and associated costs within 10 days after any scheduled hearing to the DTP for processing with copies to the Department. The DTP shall submit fifty (50) percent of such amounts on its monthly progress estimate (referenced as DRB Hearing #1, DRB Hearing #2, etc. as appropriate) for payment. The value of the services submitted for payment shall be based on the established billing rate for the number of hours/days rendered for each Board member together with any direct, non-fee expenses. DTP shall make payment to the Dispute Review Board within 60 days from its receipt of the invoices. Payment received shall constitute full compensation for services performed and for all materials, supplies, services, and incidentals required completing the services.

Each Board member shall keep, available for inspection by representatives of the Department and the DTP, for a period of three years after final payment of the Preliminary Engineering Work and Development Work, the cost records and accounts pertaining to this Agreement.

VIII. DATE OF AGREEMENT

This Agreement is effective as of ________________________

And is signed by the Party or its duly authorized representative:

1. **Board Member (Jointly appointed by Department and (WMATA)**

   ____

2. **Board Member (DTP Appointed)**

   ____

3. **Board Member (Board Appointed)**

   ____

VIRGINIA DEPARTMENT OF RAIL AND PUBLIC TRANSPORTATION

By: Department Representative:

____

Title: ____

Dulles Transit Partners

By: DTP Representative:

____

Title: ____

EXHIBIT M

DISADVANTAGED BUSINESS ENTERPRISE SUBCONTRACTING PLAN

POLICY STATEMENT

It is the policy of Dulles Transit Partners, LLC (DTP) that Disadvantaged Business Enterprises ("DBE") shall have the opportunity to participate in the performance of the this Agreement. DTP's commitment to this policy will be demonstrated by taking necessary and reasonable steps to afford DBEs the opportunity to compete for and perform work on this Project.

PLAN OBJECTIVES

The objective of this plan is to meet or exceed the Department's overall DBE Participation Goal of 10%.

PLAN STRATEGY

1. Organization

   DTP will designate a DBE liaison officer with responsibility for administering a DBE Subcontracting Plan, and encouraging and promoting the utilization of DBEs in the performance of this Agreement.

2. Subcontracting

   Appropriate subcontracting opportunities for DBEs will be established based on the items of work and timeframes for performance of the work. These subcontracting opportunities will be compared with the DBE's qualifications, availability and prior experience with the Department and/or WMATA.

3. Implementation

   Once specific opportunities for DBE participation are identified, the following guidelines will be implemented to encourage and promote interest in the Project for qualified DBE firms:

   - Arrange pre-solicitation or pre-bid meetings at which DBEs can be informed of subcontracting opportunities.

   - Advertise in general circulation any subcontracting opportunities on the Project.

   - Provide written notice to specific DBE firms that their interest in the Project is being solicited in sufficient time to allow the DBEs to participate in the subcontracting process effectively.

   - Follow-up solicitations of interest by contacting potential DBEs to determine any level of interest that they may have in the Project.

   - Provide interested DBEs with adequate information about scope of work and the requirements of the Contract.

- Negotiate in good faith with interested DBEs, not rejecting any DBE as unqualified without sound reasons based upon financial aspects and capabilities.

- Make efforts to assist interested DBEs in obtaining bonding or insurance required by the subcontract.

- Make efforts to assist interested DBEs in obtaining the necessary equipment, supplies, or materials or other necessary or related services.

- Utilize available services and community organization in soliciting potential DBE firms.

- Require major subcontracts to include second tier DBE participation meeting goals of the Project.

PARTICIPATION AND DOCUMENTATION

Firms desiring to participate as DBEs will need to be pre-qualified/DBE certified by the Virginia Department of Transportation before submitting proposals or bids for specific work. These DBE firms will need to demonstrate that their certification is current at the time subcontracts are executed.

Once a firm is determined to be a certified DBE, the appropriate dollar value of the work performed will be counted toward the applicable DBE goal. DBE participation will be counted toward meeting the goals established as follows:

- The total dollar value of a subcontract will be counted for DBEs that perform a commercially useful function when they are responsible for the execution of a distinct element of the work and carry out their responsibilities by actually performing, managing and supervising the work involved.

- When a DBE firm subcontracts part of the work of its contract to another firm, the value of the subcontracted work may be counted toward DBE goals only if the DBE's subcontractor is itself a DBE.

- If materials or supplies are obtained from a DBE manufacturer, supplier or vendor, 100% of the expenditure is counted towards the DBE goals. If materials or supplies are purchased from a DBE regular dealer, only 60% of the cost of the materials or supplies is counted toward the DBE goal.

DTP will, throughout the life of the Project, maintain records sufficient to document and demonstrate its good faith efforts used to identify and award subcontracts to qualified DBE firms. DTP will also provide the Department reasonable documentation to assist in verifying and reporting DBE participation on the Project.

EXHIBIT N

PROJECT FINANCIAL PLAN

The Dulles Corridor Rapid Transit Project's implementation strategy and financial plan relies on the use of separate public agencies for capital (construction) funding and the long-term operations and maintenance funding. The financial structure is necessary because of the structure and policies of the Washington Metropolitan Area Transit Authority (WMATA).

Because WMATA does not have a dedicated source of revenue (such as sales or property taxes) that can be utilized for capital expenditures on system expansion, it relies on the local jurisdiction in which an extension is proposed to develop and manage capital funding for an extension to the existing Metrorail system. In exchange for a local jurisdiction managing the capital funding for an extension, the WMATA Interstate Compact members (District of Columbia, State of Maryland and Commonwealth of Virginia) agree to fund that extension's operating costs (and deficits) once it is adopted as part of the regional Metrorail system.

As the local jurisdiction for the Dulles Corridor Rapid Transit Project, the Commonwealth of Virginia (Department of Rail and Public Transportation) is responsible for managing the capital funding. The Commonwealth has worked with the Federal Transit Administration, Fairfax County, Metropolitan Washington Airports Authority and Loudoun County to identify sources of capital funding for the Project.

The current Project Financial Plan, which is hereby incorporated by reference, identifies the percentage of contribution to the capital cost and identified funding sources as follows:

- **Federal Transit Administration** (50%) – New Starts (Section 5309) program

- **Commonwealth of Virginia** (25%) – Commonwealth Transportation Fund Sub-Accounts, (Commonwealth Mass Transit Capital Fund and Northern Virginia Transportation District Fund), Virginia Transportation Act of 2000, and Dulles Toll Road revenues

- **Fairfax County** (16.1%) – Dulles Corridor Transportation Improvement District(s)

- **Metropolitan Washington Airports Authority** (4.1%) – Passenger Facility Charge (PFC) Revenue Notes

- **Loudoun County** (4.8%) – Business Professional and Occupancy License (BPOL) Revenue Bonds and Loudoun County Public Transportation Fund

Phasing the construction of the project will cause the financial stakeholders to contribute funding at different times and percentages for each phase than the total percentages listed above; however, the percentages above will ultimately be realized through careful financial planning and management.

The Department and Dulles Transit Partners recognize that as of the Agreement date, sources of funding for the Project have been identified but not all of the funds have been secured beyond funding for Preliminary Engineering Work and Development Work.

EXHIBIT O

INVOICE FORM

The Payment Requisition Form, Project Development Invoice Form and Preliminary Engineering Form are included in this exhibit.

Exhibit O

Dulles Corridor Rapid Transit Project

PAYMENT REQUISITION

Contractor: Dulles Transit Partners, LLC
Contract No.

Payment Requisition Number:
Date:

			Preliminary Engineering	Development Services	Total Program
1.	Original Contract Amount:		$ -	$ -	$ -
2.	Contract Modifications:		$ -	$ -	$ -
3.	Current Contract Amount:	(1+2)	$ -	$ -	$ -
4.	Previous Job To Date:		$ -	$ -	$ -
5.	Deferral:		$ -	$ -	$ -
6.	Previous Payments:	(4-5)	$ -	$ -	$ -
7.	**Current Request:**				
	Gross		$ -	$ -	$ -
	Deferred Amount	25%	$ -	$ -	$ -
	Payment Requested		**$ -**	**$ -**	**$ -**
8.	Current Job To Date:	(4+7)	$ -	$ -	$ -
9.	Cost to Complete:	(3-8)	$ -	$ -	$ -

DRPT USE ONLY

Costs Rejected (Detail Attached)

Payment Approved

Payment Request:

Project Executive Director Date
Dulles Transit Partners, LLC

Payment Approved:

DRPT Deputy Project Director Date
Project Management and Admin.

Payment Processed:

DRPT Accounting Manager Date

Dulles Corridor Rapid Transit Project
DEVELOPMENT INVOICE

Exhibit O

Contractor: Dulles Transit Partners, LLC
Contract No.

Invoice Number:
Invoice Date:

Invoice Period: -

		Phase 1			
		Core	Incremental	Tasked	Total
1. Original Contract Amount:		$ -	$ -	$ -	$ -
2. Contract Modifications:		$ -	$ -	$ -	$ -
3. Current Contract Amount:	(1+2)	$ -	$ -	$ -	$ -
4. Previous Job To Date:		$ -	$ -	$ -	$ -
5. **Current Request:**		$ -	$ -	$ -	**$ -**
6. Current Job To Date:	(4+5)	$ -	$ -	$ -	$ -
7. Current Cost to Complete:	(3-6)	$ -	$ -	$ -	$ -

DRPT USE ONLY

Cost Rejected (Detail Attached)

Payment Recommended

Invoice Approved:

Project Executive Director Date
Dulles Transit Partners, LLC

Payment Recommended:

DRPT Deputy Project Director Date
Project Development

Exhibit O

Dulles Corridor Rapid Transit Project
PRELIMINARY ENGINEERING INVOICE

Contractor: Dulles Transit Partners, LLC
Contract No.
Sub-Contractor: Dulles Transit Engineers

Invoice Number:
Invoice Date:

Invoice Period: 15-Mar-04 -

			Phase 1		Phase 2		Total
1.	Original Contract Amount:		$ -		$ -		$ -
2.	Contract Modifications:		$ -		$ -		$ -
3.	Current Contract Amount:	(1+2)	$ -		$ -		$ -
4.	Previous Job To Date:		$ -		$ -		$ -
5.	**Current Request:**		**$ -**		**$ -**		**$ -**
6.	Current Job To Date:	(4+5)	$ -		$ -		$ -
7.	Current Cost to Complete:	(3-6)	$ -		$ -		$ -

DRPT USE ONLY

Costs Rejected (Detail Attached)

Payment Recommended

Invoice Approved:

DTE Project Manager Date
Preliminary Engineering

Payment Recommended:

WMATA Project Manager Date
Budget and Administration

WMATA Senior Project Manager Date
Preliminary Engineering

DRPT Deputy Project Director Date
Preliminary Engineering

EXHIBIT P

(Excerpted from Version 2.0 of the Project Management Plan)

3.0 PROGRAM AND PROJECT MANAGEMENT RESPONSIBILTIES

This section describes the management roles and responsibilities of the principal Project participants during Preliminary Engineering and project development. As described in Section 2.0, DRPT will serve as the Program Manager/grantee, WMATA will serve as the PE Project Manager, DTP will serve as the PE and Project Development Consultant (assuming successful PPTA negotiations) and MWAA will serve as the Technical Advisor.

3.1 Management Structure

The proposed management structure for the Dulles Corridor Rapid Transit Project is shown in Figure 3-1. The roles and responsibilities of DRPT, WMATA, DTP, and MWAA during the current NEPA environmental review and upcoming Preliminary Engineering phases are shown in Tables 3-2 and 3-3. Additional details on specific responsibilities during Preliminary Engineering are provided below.

3.2 Project Office

At the initiation of Preliminary Engineering, DRPT will establish a Project Office in the Tysons Corner area. Managers and key Project staff from DRPT, WMATA, and DTP will be co-located in this office. Day-to-day management of Project activities will be directed from this office. Facilities suitable for conducting coordination and oversight activities will be provided. As necessary, office space will be provided for representatives from other agencies involved in the Project.

3.3 Key Personnel and Reporting Relationships

Key personnel (identified as the first and second tier of the Project team) and reporting relationships are outlined in Table 3-1 below.

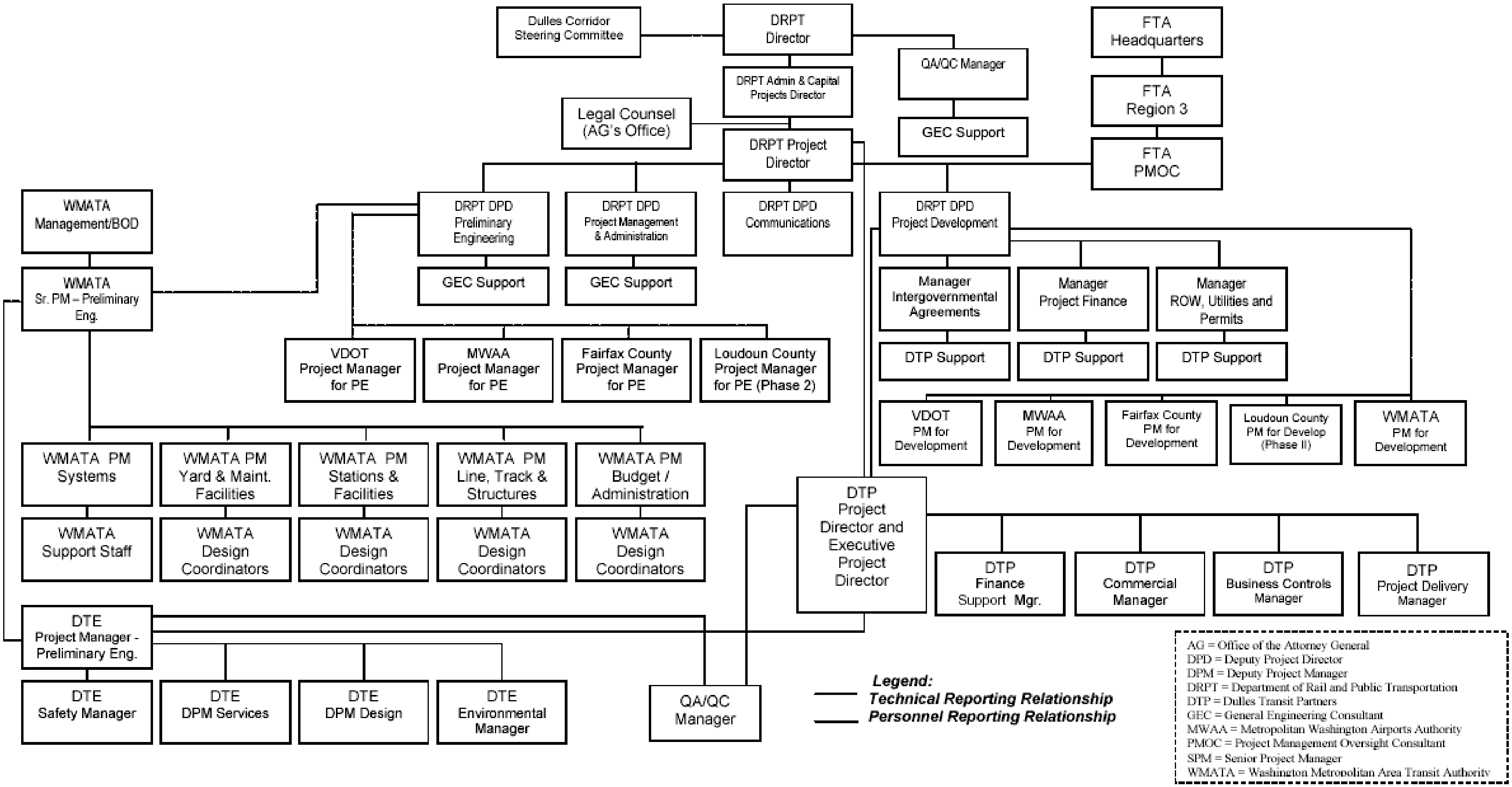
Table 3-1
KEY PERSONNEL AND REPORTING RELATIONSHIPS

Affiliation	Job Title	Reports To	Interfaces With
DRPT	Project Director	Director, Administration and Capital Projects Division	FTA, WMATA, DTP, local stakeholders, public
	Deputy Project Director – Preliminary Engineering	DRPT Project Director	FTA, WMATA, DTP, local stakeholders, public
	Deputy Project Director – Project Management and Administration	DRPT Project Director	FTA, WMATA, DTP, local stakeholders
	Deputy Project Director – Communications	DRPT Project Director	FTA, WMATA, DTP, local stakeholders, public
	Deputy Project Director – Project Development	DRPT Project Director	FTA, WMATA, DTP, local stakeholders
	QA/QC Manager	DRPT Director	FTA, WMATA, DTP
WMATA	Senior Project Manager – Preliminary Engineering	DRPT DPD Preliminary Engineering and WMATA Director of Construction	DRPT, DTP, FTA, local stakeholders
	Project Manager – Budget / Administration	WMATA Senior Project Manager and Director of Construction	DRPT, DTP
	Project Manager – Yard & Maintenance Facilities	WMATA Senior Project Manager	DRPT, DTP
	Project Manager – Stations and Facilities	WMATA Senior Project Manager	DRPT, DTP

Affiliation	Job Title	Reports To	Interfaces With
	Project Manager – Line, Track & Structures	WMATA Senior Project Manger	DRPT, DTP
	Project Manager - Systems	WMATA Senior Project Manager	DRPT, DTP
DTP/ DTE	DTP Executive Project Director and Project Director	DRPT Project Director and DRPT DPD – Project Development	FTA, WMATA, MWAA, local stakeholders, public
	Project Manager – Preliminary Engineering	DTP Project Director and WMATA Senior Project Manager	DRPT, WMATA, MWAA, Fairfax, Loudoun (Phase 2)
	Deputy Project Manager - Safety	Project Manager – Preliminary Engineering	WMATA Senior Project Manager, DRPT
	Deputy Project Manager – Services	Project Manager – Preliminary Engineering	WMATA Senior Project Manager, DRPT
	Deputy Project Manager – Design	Project Manager – Preliminary Engineering	WMATA Senior Project Manager, DRPT
	Environmental Manager	DTP Project Manager and Project Manager – Preliminary Engineering	WMATA Senior Project Manager, DRPT
	Finance Support Manager	DTP Project Director	DRPT Mgr. – Project Finance, WMATA, local stakeholders
	Project Delivery Manager	DTP Project Director	WMATA, MWAA, FTA, and local stakeholders
	Commercial Manager	DTP Project Director	DRPT DPD – Project Management and Administration, WMATA
	Business Controls Manager	DTP Project Director	DRPT DPD – Project Management and Administration, WMATA
	QA/QC Manager	DTP Project Director and Project Manager – Preliminary Engineering	DTP Project Manager – Preliminary Engineering, DRPT, WMATA

These reporting relationships combined with more detailed information on staffing for the proposed management structure for the Project is provided below in Figure 3-1.

Figure 3-1
DULLES CORRIDOR RAPID TRANSIT PROJECT REPORTING RELATIONSHIPS


Dulles Corridor Steering Committee
DRPT Director
QA/QC Manager
FTA Headquarters
DRPT Admin & Capital Projects Director
FTA Region 3
Legal Counsel (AG's Office)
DRPT Project Director
GEC Support
FTA PMOC
WMATA Management/BOD
DRPT DPD Preliminary Engineering
DRPT DPD Project Management & Administration
DRPT DPD Communications
DRPT DPD Project Development
WMATA Sr. PM – Preliminary Eng.
GEC Support
GEC Support
Manager Intergovernmental Agreements
Manager Project Finance
Manager ROW, Utilities and Permits
VDOT Project Manager for PE
MWAA Project Manager for PE
Fairfax County Project Manager for PE
Loudoun County Project Manager for PE (Phase 2)
DTP Support
DTP Support
DTP Support
VDOT PM for Development
MWAA PM for Development
Fairfax County PM for Development
Loudoun County PM for Develop (Phase II)
WMATA PM for Development
WMATA PM Systems
WMATA PM Yard & Maint. Facilities
WMATA PM Stations & Facilities
WMATA PM Line, Track & Structures
WMATA PM Budget / Administration
DTP Project Director and Executive Project Director
WMATA Support Staff
WMATA Design Coordinators
WMATA Design Coordinators
WMATA Design Coordinators
WMATA Design Coordinators
DTP Finance Support Mgr.
DTP Commercial Manager
DTP Business Controls Manager
DTP Project Delivery Manager
DTE Project Manager - Preliminary Eng.
DTE Safety Manager
DTE DPM Services
DTE DPM Design
DTE Environmental Manager
QA/QC Manager
Legend:
Technical Reporting Relationship
Personnel Reporting Relationship

AG = Office of the Attorney General
DPD = Deputy Project Director
DPM = Deputy Project Manager
DRPT = Department of Rail and Public Transportation
DTP = Dulles Transit Partners
GEC = General Engineering Consultant
MWAA = Metropolitan Washington Airports Authority
PMOC = Project Management Oversight Consultant
SPM = Senior Project Manager
WMATA = Washington Metropolitan Area Transit Authority

3.4 Roles and Responsibilities – NEPA Environmental Review

On behalf of DRPT, WMATA is currently managing the Project's NEPA environmental review using its own technical consultants (CTC). DRPT staff is actively participating in these activities and MWAA staff is supporting the environmental review effort. DRPT and WMATA have already developed a complete set of General Plans for the Project, as required by WMATA's own project development process. DTP was not involved in preparing the Draft or Supplemental Draft EIS or supporting engineering documentation and it is not involved in preparing the Final EIS.

Roles and responsibilities during the NEPA phase for each of the principal participants are shown in Table 3-2.

Table 3-2
ROLES AND RESPONSIBILITIES – NEPA ENVIRONMENTAL REVIEW

Task	FTA	DRPT	WMATA	DTP	MWAA
1. Public Hearing	Approve	Co-Conduct	Co-Conduct		
2. Public Hearing Report, Preliminary LPA Recommendation		Prepare for CTB	Prepare for WMATA Board		Review
3. Endorsement of Recommended LPA by MWAA Board		Support	Support		Prepare
4. Request to Enter into PE (includes Local Financial Commitment)	Approve	Prepare	Participate		Support
5. Selection of LPA by WMATA Board		Support	Prepare		Support
6. Selection of LPA by CTB		Prepare	Support		Support
7. Prepare Supplemental Draft EIS	Approve	Participate & Approve	Prepare & Manage		
8. Public Hearing	Approve	Co-Conduct	Co-Conduct		
9. Prepare FEIS	Approve	Participate & Approve	Prepare & Manage		Support
10. Publish FEIS	Approve	Support	Support		
11. FTA Record of Decision (ROD)	Prepare Approve	Support	Support		

Definitions:

- **Approve:** Authority to approve action
- **Co-Conduct:** DRPT and WMATA appointed or elected officials empowered to hold public hearing
- **Manage:** Direct day-to-day management
- **Participate:** Active in daily functions
- **Prepare:** Responsible for preparation of necessary documents
- **Review:** Action not requiring decision
- **Support:** Respond to requested items and actions

3.5 Roles and Responsibilities – Preliminary Engineering and Project Development Activities

DRPT will be responsible for overall program management during Preliminary Engineering. This includes contractual management and direct control and oversight of the Preliminary Engineering scope, schedule, and budget. In addition, DRPT will be responsible for all management of project development activities.

WMATA, as the ultimate owner and entity responsible for operating and maintaining the completed Project (as accepted into the ARS), will serve as the Technical Manager and provide day-to-day management of DTP's PE activities under the for the PE Scope of Work to ensure that the completed Project is implemented in accordance with WMATA design standards and criteria. WMATA, as the Technical Manager for the PE Scope of Work, is further given single point managing and coordinating accountability for the PE process to ensure compliance with WMATA's engineering design, operating, and maintenance criteria and standards. A delegation of authority from DRPT to WMATA is incorporated as Appendix 1 in the PE Scope of Work.

WMATA will provide day-to-day project management services for Preliminary Engineering through an intergovernmental agreement with DRPT (Second Agreement) and will report to DRPT's Deputy Project Director for Preliminary Engineering on a regular basis (weekly or more frequently if necessary). WMATA's authority is defined by and subject to the limitations identified in the Second Agreement.

The Comprehensive Agreement includes Project Development activities in addition to Preliminary Engineering activities. As specified in the Second Agreement, WMATA will review the following deliverables prepared under the Development Scope of Work: the Community Outreach Plan, the Right-of-Way Acquisition Plan, offer packages for each acquisition, master or intergovernmental agreements (as applicable), the Utilities Report, utility relocation agreements (as applicable), and permit applications (as applicable). WMATA will also participate in Value Planning workshops and review the resulting recommendations.

Assuming successful negotiations, DTP will conduct the engineering and technical analyses in accordance with the PE Scope of Work and the Development activities Scope of Work. The DTP Project Manager for Preliminary Engineering will report to the WMATA Senior Project Manager for Preliminary Engineering. For Project Development activities, the DTP Project Director will report to the DRPT Deputy Project Director for Project Development. The DTP Project Director will also report to the DRPT Deputy Project Director for Project Management and Administration on contractual issues and to the DRPT Project Director on overall program issues. MWAA will participate in Preliminary Engineering activities and project development activities as they relate to its facilities.

The scope of work for Preliminary Engineering has been developed jointly by DRPT and WMATA and has been reviewed and commented on by MWAA, VDOT, Fairfax County, Loudoun County, and DTP. The scope of work for project development activities has been developed by DTP and has been reviewed and commented on by DRPT, WMATA and VDOT. Work on Preliminary Engineering for the Dulles Corridor Rapid Transit Project will be conducted concurrently with the completion of the Project's Final EIS. Any unresolved or new technical issues that could prejudice the outcome of the Project's NEPA environmental review will be excluded from the Preliminary Engineering and project development scopes of work until the FTA has issued a Record of Decision for the Project. At that time, DRPT will authorize the DTP to proceed with any previously excluded elements. FTA authorized this approach by letter (dated March 25, 2003) to DRPT.

The roles and responsibilities of the principal participants during Preliminary Engineering are shown in Table 3-3. A description of these responsibilities follows.

Table 3-3
ROLES AND RESPONSIBILITIES – PRELIMINARY ENGINEERING AND PROJECT DEVELOPMENT

Task	DRPT	WMATA	DTP	MWAA
1. Rail PE Grant Application and Management	Prepare, Apply & Manage	Support		
2. Second Agreement between DRPT and WMATA	Review & Approve	Prepare & Approve		
3. Project Management Plan	Prepare & Submit	Support	Support	Support
4. Scope of Work for PE Services	Prepare & Approve	Participate & Recommend	Support	Review
5. Standards, Specifications & Criteria (Operations, Design, Construction)		Provide	Participate	Provide
6. PE Services Technical & Price Proposal			Provide	
7. Development Services Technical & Price Proposal			Provide	
8. PE Technical & Price Proposal Evaluation, Negotiation and NTP	Evaluate & Approve	Participate & Recommend	Participate	
9. Project Development Technical & Price Proposal Evaluation, Negotiation and NTP	Evaluate & Approve	Support	Participate	
10. Design and plans production necessary to prepare “biddable” documents, determine fixed price of Project, meet the FTA requirement for PE/FFGA cost estimate.	Review & Accept	Manage & Approve	Prepare	
11. Value Engineering	Approve & Manage	Support & Recommend	Support	Support
12. Agreements: Agencies, Jurisdictions, Utilities	Manage & Approve	Review (as applicable)	Prepare or Support	Support
13. Project Fixed Price Estimate per PPTA	Approve & Manage	Review	Prepare	
14. PPTA Comprehensive Agreement Negotiation and Execution	Prepare, Approve & Manage	Participate	Participate	Participate
15. Request FTA to Enter into Final Design	Approve, Submit & Manage	Support	Support	Support
16. Local Funding Agreement in Support of FFGA (DRPT, WMATA, Fairfax County-Phase1& 2, Loudoun County-Phase 2, MWAA -Phase 2)	Prepare, Approve & Manage	Support	Support	Review & Approve
17. FTA Financial Plan - Capital Cost	Prepare	Support	Support	Support
18. FTA Financial Plan - O&M Subsidy	Support	Manage & Prepare		
19. New Starts Submission a. Project Justification	Prepare & Manage	Support	Support	
b. Financial Plan	Prepare& Manage	Support	Support	Support

Task	DRPT	WMATA	DTP	MWAA
20. FFGA Negotiations & Execution with FTA	Manage	Support	Support	Support
21. FTA Grant Management	Manage	Support (as required)		
22. FTA PMOC Coordination	Manage	Participate	Support	
23. PE Progress Payments	Review & Approve	Evaluate & Recommend	Prepare	
24. Public Involvement and Community Outreach Activities (Post-ROD)	Manage & Approve	Support	Participate & Prepare	Support
25. ROW Requirements	Approve	Confirm	Prepare	

Definitions:

- **Accept:** Contractual responsibility to concur on completion of a deliverable
- **Apply:** Active effort of responsible organization to make necessary application
- **Approve:** Authority to review and approve an action or deliverable
- **Conduct:** Responsible for executing
- **Confirm:** Confirmation that parcels meet the minimum required area for operation and maintenance of the Metrorail system.
- **Evaluate:** Technical review leading to decision
- **Manage:** Direct day- to- day management
- **Participate:** Active in daily functions
- **Prepare:** Responsible for preparation of necessary documents
- **Provide:** Delivery of required documents or equipment
- **Recommend:** Active recommendation of action required
- **Review:** Examination not requiring a decision
- **Submit:** Action of packaging required documents and submitting to requesting organization
- **Support:** Respond to requested items and actions

3.5.1

3.5.1 Preliminary Engineering Grant Application and Management (Phase 1)

The roles and responsibilities of the principal participants in completing this task are outlined below. DTP and MWAA have no responsibilities in this task.

DRPT Role – Prepare, Apply and Manage:

- Prepare the justification and forms necessary to apply for funds under Section 5309 New Starts Grant from the FTA to fund the Preliminary Engineering for Phase 1.
- Manage Project grant funds under the oversight of the CTB (the lawfully constituted governance Board for DRPT), which is responsible for administering and allocating transportation trust funds. The CTB is charged with assisting the DRPT through the review and approval of policies and transportation objectives to facilitate the coordination of rail and public transportation plans and highway programs. Decisions, determinations and directives of the CTB are made in accordance with federal and state laws, regulations, and FTA guidelines.

WMATA Role – Support

- Assist DRPT by providing information necessary to complete the grant application.
- Share its experience and lessons learned from other WMATA projects, and if necessary, provide grants management assistance.

3.5.2 Second Agreement between DRPT and WMATA (Phase 1 and 2)

The roles and responsibilities of the principal participants in completing this task are outlined below. DTP and MWAA have no responsibilities in this task.

DRPT Role – Review and Approve:

- Review draft agreement prepared by WMATA and provide approval subject to meeting DRPT's request for services.

WMATA Role – Prepare and Approve

- Prepare intergovernmental agreement for DRPT's review and approval that specifies the terms and conditions of DRPT's reimbursement to WMATA for requested services.
- WMATA Board of Directors will approve the Second Agreement.

3.5.3 Preparation of the Project Management Plan (PMP) (Phase 1 and 2)

The roles and responsibilities of the principal participants in completing this task are outlined below.

DRPT Role – *Prepare and Submit:*

- Prepare the PMP.
- Coordinate review and input from WMATA, DTP, and MWAA during the development of the PMP.
- Update and revise the PMP at major Project milestones.

WMATA Role – Support:

- Provide DRPT input regarding WMATA organization and technical capacity.
- Review the PMP and subsequent revisions.

DTP Role – Support:

- Provide DRPT input regarding DTP organization and technical capacity.
- Review the PMP and subsequent revisions.

MWAA Role – Support:

- Provide DRPT input regarding MWAA organization and technical capacity.
- Review the PMP and subsequent revisions.

3.5.4 Scope of Work and Description of Project for PE Services (Phase 1 and 2)

The roles and responsibilities of the principal participants in completing this task are outlined below.

DRPT Role – Prepare and Approve:

- Prepare, in coordination with WMATA, scope of work for PE services.
- Approve scope of work for PE services and prepare agreement with DTP.

WMATA Role – Participate and Recommend:

- Participate with DRPT in the development of the scope of work for PE services.
- Incorporate the quality standards and safety and operational requirements.
- Review and recommend to DRPT the drawing list and level of completion for each drawing.
- Develop the list of studies and coordination required to ensure quality and system integrity.

DTP Role – Support:

- Provide information as requested by DRPT or WMATA for incorporation into the scope of work.
- Coordinate with WMATA, MWAA and DRPT to insure that the scope of work addresses all areas sufficient to develop a firm fixed price.
- Develop the drawing list and level of completion for each drawing.

MWAA Role – Review:

- Provide input as necessary and review scope of work developed by DRPT and WMATA.

3.5.5 Standards, Specifications and Criteria (Design, Construction, Operations) (Phase 1 and 2)

The roles and responsibilities of the principal participants in completing this task are outlined below. DRPT has no responsibilities in this task.

WMATA Role – Provide:

- Provide current and updated WMATA design criteria, specifications, and operating standards.

DTP Role – Participate:

- Assist in reviewing design, construction, and operational standards with WMATA, as required.
- Coordinate with WMATA, MWAA, and VDOT to ensure consistency of design, construction, and operational standards.

MWAA Action – Provide:

- Coordinate with FAA to establish pertinent design, construction, and operation standards.
- Consolidate facility-specific design criteria or specifications and provide to WMATA and the DTP.

3.5.6 PE Services Technical and Price Proposal per Scope of Work (Phase 1 and 2)

The roles and responsibilities of the principal participants in completing this task are outlined below. DRPT, WMATA, and MWAA have no responsibilities in this task.

DTP Role – Provide:

- Prepare a detailed cost estimate per the scope of services developed by DRPT and WMATA.

3.5.7 Development Services Technical and Price Proposal per Scope of Work (Phase 1)

The roles and responsibilities of the principal participants in completing this task are outlined below. DRPT, WMATA, and MWAA have no responsibilities in this task.

DTP Role – Provide:

- Prepare a detailed cost estimate per the scope of services developed by DRPT.

3.5.8 PE Technical and Price Proposal Evaluation, Negotiation, and Issuance of Notice To Proceed (Phase 1 and 2)

The roles and responsibilities of the principal participants in completing this task are outlined below. MWAA has no responsibilities in this task.

DRPT Role – Evaluate and Approve:

- Evaluate detailed cost proposal submitted by DTP.
- Obtain independent cost or price analysis from GEC.
- Approve proposal based on input from negotiating team (includes WMATA and GEC).

WMATA Role – Participate and Recommend:

- Serve on technical and price evaluation teams composed of representatives from WMATA's Office of General Counsel (COUN), as required, Department of Operations (OPER) and Office of Construction (CONS) to evaluate the proposal.
- Recommend action to DRPT.

DTP Role – Participate:

- Participate in proposal negotiations with DRPT negotiating team (includes WMATA and GEC).
- Provide all necessary information to clarify assumptions incorporated in the cost proposal.
- Negotiate PE cost and performance schedule.

3.5.9 Project Development Activities Technical and Price Proposal Evaluation, Negotiation, and Issuance of Notice To Proceed (Phase 1)

The roles and responsibilities of the principal participants in completing this task are outlined below. MWAA has no responsibilities in this task.

DRPT Role – Evaluate and Approve:

- Evaluate detailed cost proposal submitted by DTP.
- Obtain independent cost or price analysis from GEC.
- Approve proposal based on input from negotiating team.

WMATA Role – Support:
- Serve on technical and price evaluation teams composed of representatives from WMATA's Office of General Counsel (COUN), as required, Office of Construction (CONS) to evaluate the proposal.

DTP Role – Participate:
- Participate in proposal negotiations with DRPT negotiating team (includes WMATA).
- Provide all necessary information to clarify assumptions incorporated in the cost proposal.
- Negotiate project development activities cost and performance schedule.

3.5.10 Design and Plan Production Necessary to Develop "Biddable" Documents, Determine Fixed Price of Project, and Meet FTA requirements for Preliminary Engineering/Full Funding Grant Agreement (PE/FFGA) Project Cost (Phase 1 and 2)

The roles and responsibilities of the principal participants in completing this task are outlined below: MWAA has no responsibilities in this task.

DRPT Role – Review and Accept:
- Participate in all review meetings and provide technical input to WMATA and DTP as needed.
- Provide regular oversight of WMATA and provide approval for decisions that are beyond the limited authority provided to WMATA by DRPT in the Second Agreement.
- Manage the overall Dulles program including budget, schedule, and scope of work in order to meet FTA deadlines for completing Preliminary Engineering and entering into a FFGA.
- Accept the PE Plans and Specifications and other deliverables as contractually required under the Comprehensive Agreement.

WMATA Role –Manage and Approve:
- Provide day-to-day technical management of Preliminary Engineering activities in accordance with Preliminary Engineering scope of work and the Delegation of Authority.
- Approve Preliminary Engineering plans and specifications and other deliverables required under the PE Scope of Work and provide a recommendation to DRPT to accept the deliverables.

DTP Role – Prepare:
- Complete all Preliminary Engineering activities in accordance with the Preliminary Engineering scope of work and documentation required to submit a firm fixed price proposal for design and construction of the Project.
- Develop "biddable" plans, specifications and general conditions.
- Satisfy all specified design criteria and specifications.
- Participate in technical review meetings.
- Develop a technical and cost proposal to design-build the Project that meets FTA, DRPT and WMATA criteria.

3.5.11 FTA-Required Value Engineering (Phase 1 and 2)

The roles and responsibilities of the principal participants in completing this task are outlined below.

DRPT Role – Approve and Manage:

- Develop a Value Engineering management plan that will determine the methodology and frequency of Value Engineering reviews.
- Hire an independent Value Engineering consultant to conduct studies.
- Participate in the Value Engineering studies.
- Review Value Engineering Report and coordinate input and recommendations from WMATA and MWAA.
- Approve Value Engineering recommendations and issue design directives.

WMATA Role –Support and Recommend:

- Review the Value Engineering studies and methodology to ensure WMATA quality, safety, and standards are maintained.
- Participate in the selection of the Value Engineering Consultant.
- Recommend items from Value Engineering Report to be adopted by DRPT.
- Ensure approved Value Engineering recommendations are incorporated into design.

DTP Role – Support:

- Provide materials and information to the Value Engineering team as requested.
- Incorporate approved Value Engineering recommendations into design.

MWAA Role – Support:

- Review Value Engineering Report and provide DRPT and WMATA input on recommendations that affect MWAA facilities.

3.5.12 Agreements with Agencies, Jurisdictions, and Utilities (Phase 1)

The roles and responsibilities of the principal participants in completing this task are outlined below.

DRPT Role –Manage and Approve:

- Negotiate, approve, and hold all agreements related to the implementation of the Project.

WMATA Role – Review (as applicable):

- Review and approve agreements related to future operation of the Metrorail system.
- Advise DRPT of additional agreements needed to implement the Project.

DTP Role – Prepare or Support:

- Assist DRPT in securing necessary master or intergovernmental agreements with various agencies and jurisdictions.
- Participate in development of agreements to support the design-build process, ensuring that the agreements clearly define all interfaces between the parties and support the development of a firm-fixed price proposal for design and construction of the Project.

MWAA Role –Support:

- Participate in the development of agreements related to MWAA's role in the project or when MWAA is a party to the agreement.

3.5.13 Project Fixed Price as required by the Public Private Transportation Act (Phase 1 and 2)

The roles and responsibilities of the principal participants in completing this task are outlined below.

DRPT Role – Approve and Manage:

- Manage negotiation process.
- Approve DTP proposal (if negotiations are successful) and recommend to the CTB.
- Manage Comprehensive Agreement with DTP.
- Obtain independent cost or price analysis from GEC.

WMATA Role – Review:

- Assist DRPT in establishing the validity of the Project price.
- Participate on DRPT's evaluation team to evaluate the price and develop a recommendation.

DTP Role – Prepare:

- Prepare firm fixed price for all design and construction of the Project.

3.5.14 PPTA Comprehensive Agreement (Phase 1 and 2)

The roles and responsibilities of the principal participants in completing this task are outlined below.

DRPT Role – Prepare, Approve, and Manage:

- Prepare PPTA Comprehensive Agreement.
- Ensure that all Project safety and quality standards are addressed in the Comprehensive Agreement.
- Ensure that the Comprehensive Agreement address all Commonwealth interests.
- Manage negotiations of the Comprehensive Agreement.
- Review WMATA's comments on the Comprehensive Agreement.
- Approve Comprehensive Agreement.
- Manage execution of the Comprehensive Agreement consistent with the PPTA statutory requirements.

WMATA Role – Participate:

- Review and comment on the Comprehensive Agreement.

DTP Role – Participate:

- Participate in Comprehensive Agreement negotiations with DRPT.
- Provide clarifications and information as requested by DRPT.
- Negotiate the terms of the agreement to include all aspects of the development, Preliminary Engineering, and design-build phases of the program.

MWAA Role – Participate:

- Provide information related to MWAA facilities as requested by DRPT to assist in completing negotiations on the Comprehensive Agreement.

3.5.15 Request FTA Permission to Enter into Final Design (Phase 1)

The roles and responsibilities of the principal participants in completing this task are outlined below.

DRPT Role – Approve, Submit, and Manage:

- Coordinate with Fairfax County, Loudoun County (Phase 2), and MWAA to prepare non-federal funds commitment documentation for inclusion in the request for final design approval.
- Manage WMATA and DTP support activities.
- Review and approve documentation to be included in the FTA final design request.
- Submit request for entry into final design to FTA.

WMATA Role – Support:

- Assist DRPT in completing the request to enter into Final Design.

DTP Role – Support:

- Assist DRPT in compiling necessary information and documentation for the Final Design request.
- Coordinate right-of-way acquisition activities with DRPT and WMATA.
- Support and provide information, as necessary, to DRPT including price and scope of work.

MWAA *Role – Support:*

- Provide documentation necessary to demonstrate financial commitment to the Project.

3.5.16 Local Funding Agreement in Support of FFGA between: DRPT and MWAA (Phase 2); DRPT and Fairfax County (Phase 1 and 2); and DRPT and Loudoun County (Phase 2).

The roles and responsibilities of the principal participants in completing this task are outlined below.

DRPT Role – Prepare, Approve, and Manage:

- Prepare local funding agreements with Fairfax County (Phase 1 & 2), MWAA (Phase 2) and Loudoun County (Phase 2).
- Negotiate and approve funding agreements with financial partners.

WMATA Role – Support:

- As requested by DRPT, assist in completing the local funding agreements.

DTP Role – Support:

- Develop and advance Project financial data delineating the programmed sources and uses of funds for the Project.

- Support DRPT by providing information necessary to prepare and negotiate local funding agreements.

MWAA Role – Review and Approve:
- Review local funding agreement documents to ensure MWAA's interests are addressed.
- Negotiate and approve local funding agreement with DRPT.

3.5.17 FTA Financial Plan – Capital Cost (Phase 1 and Phase 2)

The roles and responsibilities of the principal participants in completing this task are outlined below.

DRPT *Role – Prepare:*
- Develop Project funding plan and coordinate with Fairfax County (Phase 1 & 2), MWAA (Phase 2) and Loudoun County (Phase 2).
- Develop capital cost estimate.

WMATA Role – Support:
- Support development of the financial plan and capital cost estimate, as requested by DRPT.

DTP Role – Participate:
- Assist DRPT and WMATA by consolidating information necessary for financial plan and capital cost estimate.
- Support DRPT in the development and modeling of the data to be provided in the financial plan.

MWAA Role – Support:
- Assist DRPT by providing information related to MWAA's participation needed to develop the Project financial plan.

3.5.18 FTA Financial Plan – Operating and Maintenance Subsidy (Phase 1 and 2)

The roles and responsibilities of the principal participants in completing this task are outlined below. DTP and MWAA have no responsibilities for this task.

DRPT Role – Support:
- Support WMATA in developing O&M subsidy section of FTA Financial Plan .

WMATA Role – Prepare and Approve:
- Prepare the operating cost financial plan and operating subsidy allocation formula per the WMATA Compact formula.
- Approve the operating cost financial plan and operating subsidy allocation (WMATA Board of Directors).

3.5.19 New Starts Submission and Project Justification (Project Justification, and Financial Plan) (Phase 1)

DRPT Role – Prepare and Manage:

- Prepare the New Starts report in coordination with Project funding partners, WMATA, and DTP
- Coordinate submission of annual New Starts submittals to FTA.

WMATA Role – Support

- WMATA will support DRPT as required in preparation of the project justification materials.

DTP Role – Support:

- DTP will assist DRPT and WMATA by providing current financial plan data associated with the Project.

3.5.20 FFGA with FTA (Negotiate and Execute) (Phase 1)

The roles and responsibilities of the principal participants in completing this task are outlined below.

DRPT Role – Manage:

- Negotiate FFGA with FTA.
- Manage the execution of the FFGA.

WMATA Role – Support:

- Support drafting of the FFGA, as required.
- Provide input to DRPT for project management line items and vehicles, and review other budget elements.

DTP Role – Support:

- Provide DRPT with data and information necessary to meet FTA requirements.
- Manage the project execution in accordance with FTA guidelines (assuming successful negotiations).
- Cooperate with FTA-PMOC.

MWAA Role – Support:

- Provide DRPT with information necessary to prepare FFGA.

3.5.21 FTA Grant Management (Phase 1)

The roles and responsibilities of the principal participants in completing this task are outlined below. DTP and MWAA have no responsibilities in this task.

DRPT Role – Manage:

- Obtain FTA grants and manage disbursement of capital funds for project development.

WMATA Role – Support:

- Provide support to DRPT as needed.

3.5.22 FTA Project Management Office (PMO) (Phase 1)

The roles and responsibilities of the principal participants in completing this task are outlined below. MWAA has no responsibilities in this task.

DRPT Role – Manage:

- Meet with FTA project management oversight consultants on a monthly basis and provide Project budget and schedule reports (per FTA's Project and Construction Management Guidelines).

WMATA Role – Participate:

- Participate with DRPT in meetings with FTA-PMOC and provide requested information on the Project.
- Support DRPT coordination with FTA-PMOC.

DTP Role – Support:

- As requested, meet with FTA-PMOC or provide requested information on the Project.
- Support DRPT coordination with FTA-PMOC.

3.5.23 Progress Payments (Phase 1 and 2)

The roles and responsibilities of the principal participants in completing this task are outlined below. MWAA has no responsibilities in this task.

DRPT Role – Review and Approve:

- Review and approve payments for Preliminary Engineering activities completed by WMATA and DTP (based on WMATA recommendations).
- Approve payment for work completed by WMATA and DTP for development activities.

WMATA Role – Evaluate and Recommend:

- Receive the DTP's invoices and determine progress.
- Recommend action to DRPT.

DTP Role – Prepare:

- Prepare invoices for work completed.
- Prepare progress reports and schedules for Preliminary Engineering activities.

3.5.24 Public Involvement and Community Outreach (Phase 1 and 2)

The roles and responsibilities of the principal participants in completing this task are outlined below.

DRPT Role – Manage and Approve:

- Develop a comprehensive outreach program in coordination with WMATA.
- Conduct scheduled outreach sessions.

WMATA Role – Support:

- Coordinate with WMATA's system-wide outreach and participate in DRPT's public outreach program, as required.

DTP Role – Participate and Prepare:

- Prepare materials and participate in outreach activities with DRPT and WMATA.

MWAA Role – Support:

- Participate in outreach activities as requested DRPT.

3.5.25 Initiate ROW Acquisition/Ownership (Phase 1 and 2)

The roles and responsibilities of the principal participants in completing this task are outlined below.
MWAA has no responsibilities in this task.

DRPT Role – Manage and Approve:

- DRPT will develop a property acquisition plan for the Project and manage its implementation.
- DRPT will approve all right-of-way acquisition.

WMATA Role – Confirm:

- Review right-of-way drawings and confirm minimum property requirements for operation and maintenance of the Metrorail system.

DTP Role – Prepare:

- DTP will assist DRPT in the development of the property acquisition plan and prepare all documentation needed to support property acquisition.

EXHIBIT Q

CERTAIN LITIGATION DISCLOSED

Herrity et al. v. Commonwealth of Virginia and Board of Supervisors of Fairfax County, Chancery No. 187331, filed December 5, 2003 in the Circuit Court of the County of Fairfax, seeking declaratory and injunctive relief.